2N® Helios IP

Door Access Communicator

User Manual

Version	1.11.0
Firmware	1.11.x

www.2n.cz

The 2N TELEKOMUNIKACE a.s. joint-stock company is a Czech manufacturer and supplier of telecommunications equipment.

The product family developed by 2N TELEKOMUNIKACE a.s. includes GSM gateways, private branch exchanges (PBX), and door and lift communicators.
2N TELEKOMUNIKACE a.s. has been ranked among the Czech top companies for years and represented a symbol of stability and prosperity on the telecommunications market for almost two decades. At present, we export our products into over 120 countries worldwide and have exclusive distributors on all continents.

2N® is a registered trademark of 2N TELEKOMUNIKACE a.s.. Any product and/or other names mentioned herein are registered trademarks and/or trademarks or brands protected by law.

CE

Declaration of Conformity

2N TELEKOMUNIKACE a.s. hereby declares that the 2N® Helios IP product complies with all basic requirements and other relevant provisions of the 1999/5/EC directive. For the full wording of the Declaration of Conformity see the CD-ROM enclosed and at www.2n.cz.

The 2N TELEKOMUNIKACE company is a holder of the ISO 9001:2000 certificate. All development, production and distribution processes of the company are managed by this standard and guarantee a high quality and advanced technical level of and a professional approach to all of our products.

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1 Product Overview

In this section, we introduce the **2N® Helios IP** product, outline its application options and highlight the advantages following from its use.

Here is what you can find in this section:

- Product Description
- 2N® Helios IP Components and Associated Products
- Changes
- Terms and Pictograms Used

1.1 Product Description

Basic Features

The **2N® Helios IP door communicator** is capable of replacing the traditional doorbell button panel with a speakerphone and the entire system of wiring, bells and intercom installations in buildings where structured cabling is installed. Its installation is very easy, all you need is connect it to the other LAN elements using a twisted UTP cable.

By pressing any of the quick dial buttons, 2N® Helios IP will set up a call to the number that had been stored in the respective memory. The number of buttons can be extended up to 54 using 8-button or 16-button extending modules.

Thanks to an integrated scheduler it is possible to configure each of the buttons in such a way that the called party is always available.

It is possible to define up to three telephone numbers for each of the buttons, between which 2N® Helios IP switches at absence.

Beside the buttons, you can also use the numeric keypad, which also serves as a code lock. With the use of this keypad you can also use the system as a button telephone. The keypad can be combined with the quick dialling buttons.

2N® Helios IP supports video streaming. This function allows the user to scan the area in front of the 2N® Helios IP camera. Thus, 2N® Helios IP provides better and broader services than a standard house intercom systems. Thanks to the integrated SIP protocol it can make use of all VoIP services, call forwarding at absence (to another office, to the VoiceMail system or a cellular phone) or call switching (from the secretary's office to a specific person, e.g.).

In addition, 2N® Helios IP includes a switch that helps you control the electric lock from any VoIP telephone (by entering the code using tone dialling).

Advantages of Use

- Works in the Ethernet network
- Power supply over Ethernet – PoE
- SIP communication protocol
- Integrated web server for configuration
- Up to 54 quick dialling buttons
- Up to 999 users / user groups
- Video (camera-equipped models) streaming
- Display of information (display-equipped models)
- Integrated scheduler with day/night/weekend modes
- Can be used as a standard VoIP telephone and a code lock (keypad-equipped models)

- Modular system – up to 54 buttons + keypad
- Smart design, top material – high-quality stainless steel
- Flat design – can be mounted without wall cutting
- Water resistant
- Perfectly hermetic buttons
- Electronic part completely separated from the name plates
- Electric lock switch – controlled directly from the VoIP telephone
- Quality white backlighting of buttons – white LEDs
- DTMF according to RFC2833, in-band
- High-quality acoustic parameters
- Electronic volume setting (without cover opening) and HandsFree
- Electronic adjustment of backlight

Optional Accessories

Vandal resistant Mask

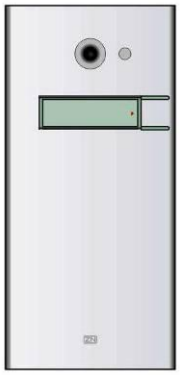
- A robust metal cover for increased resistance against vandalism.
- The cover price includes a steel wall mounting box.
- It can also be purchased additionally.

Additional switch

- Normally-open/Normally-closed contact (relay).
- Can be switched on for an unlimited period of time.

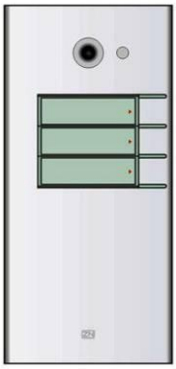
1.2 2N® Helios IP Components and Associated Products

Basic Units



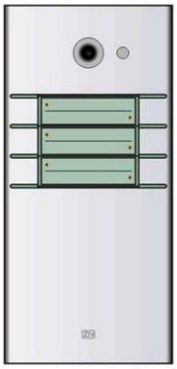
9137111(C)E

Basic unit
1 button



9137131(C)E

Basic unit
3 buttons



9137161(C)E

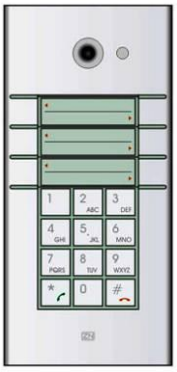
Basic unit
3×2 buttons

9137111(C)KE

Basic unit
1 button
+ keypad

9137131(C)KE

Basic unit
3 buttons
+ keypad



9137161(C)KE

Basic unit
3×2 buttons
+ keypad

9137160(C)KDE

Basic unit
3×2 buttons
+ keypad
+ display

(C) = integrated camera

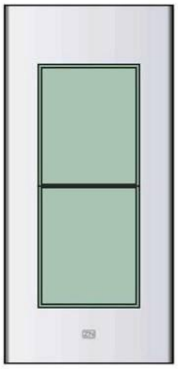
Extending modules

9135181E

Extending module
8 buttons

9135182E

Extending module
8×2 buttons



9135310E

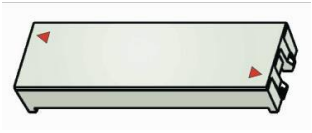
Info panel

Backlit panel without buttons; used for insertion of a telephone directory, company logo, house number, etc.

Extenders

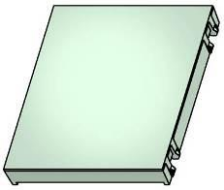
9135301E

Spare button name plate



9135302E

Spare double-button name plate



9135311E

Info panel – name plate

Replacing cover for four name tags. Helps you use a half of the extending module for insertion of a telephone directory, working hours, etc.

Tips

- All units can be surface mounted without needing any additional accessories.
- To make them even more robust and resistant, use a Vandal Resistant mask.

Caution

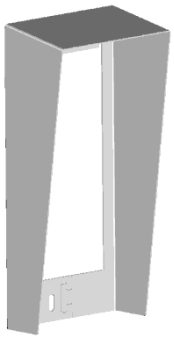
- For flush or outdoor mounting you need to use the accessories; see the Mounting Accessories subsection.

Software Facilities of 2N® Helios IP Basic Units

	91371x1(CK) 2N® Helios IP	**9137901** 2N® Helios IP with professional license
Number of users Maximum number of users – phone directory capacity.	54	999
Number of time profiles Maximum number of time profiles.	3	20
Electric lock codes Maximum number of global codes and user codes for electric lock activation.	2 global, No user codes	10 global, User codes available
Telephone mode Enables 2N® Helios IP to behave as an ordinary telephone – enables the phone number to be dialled from the keypad.	YES	YES
RTSP server Built-in RTSP server for audio and video streaming independently of phone calls.	NO	YES
SIP video Supports video calls.	YES	YES
Activation codes Supports codes for activation and deactivation of users and time profiles.	NO	YES
Substitute function Enables to enter a substitute for a user that will be dialled in case the user is unreachable or inactive.	NO	YES
TFTP client Automatic configuration and firmware upgrade from TFTP server.	NO	YES
Extended lock control Extended settings for built-in and additional switches.	NO	YES
User sounds Enables recording of user sounds to replace standard status signalling sounds.	NO	YES

To upgrade 2N® Helios IP to 2N® Helios IP with professional license, use the licence key, Part No. **9137901**.

Mounting Accessories



9135331E

Surface 1-module roof

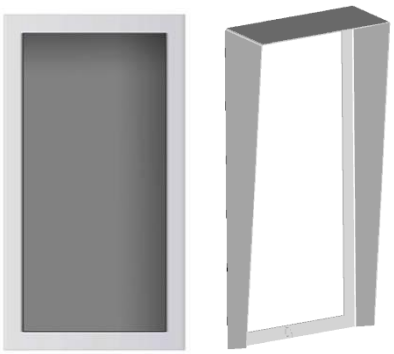
Dimensions
103×218×60 mm
(W×H×D)

9135351E

Wall mounting box
with 1-module frame

Dimensions
125×235×46 mm
(W×H×D)

Wall hole
110×220×50 ±5 mm

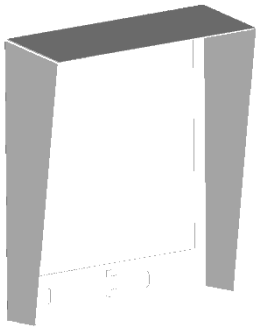


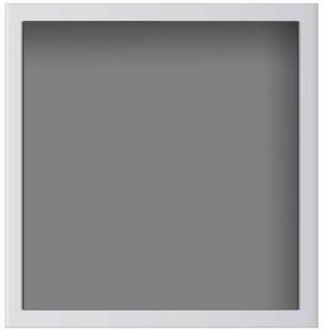
9135361E

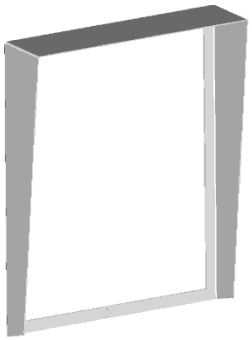
Wall mounting box
with 1-module roof

Roof dimensions
129×240×41 mm
(W×H×D)

Wall hole
110×220×50 ±5 mm







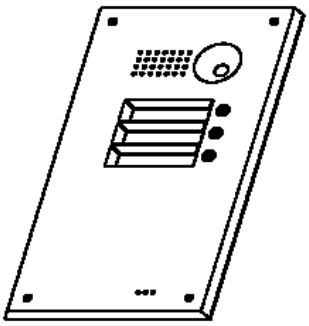
9135332E	9135352E	9135362E
Surface 2-module roof **Dimensions** 203×218×60 mm (W×H×D)	Wall mounting box with 2-module frame **Dimensions** 225×235×46 mm (W×H×D) **Wall hole** 210×220×50 ±5mm	Wall mounting box with 2-module roof **Roof dimensions** 229×240×41 mm (W×H×D) **Wall hole** 210×220×50 ±5mm

The mounting accessories are made of stainless steel. For outdoor applications, the use of the roof is required unless weather protection is provided otherwise. The box with frame (without roof) allows for installation of 2N® Helios IP in indoor applications so that the unit does not practically stick out (up to 1 mm).

Increased Resistance Accessories

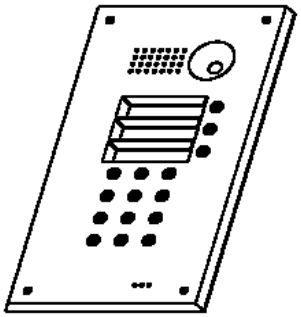
Warning

- Item No. **9135351E** cannot be used! Use a dedicated box for installation of the Vandal resistant mask!



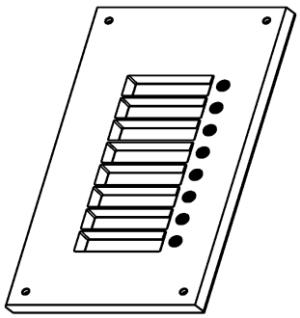
9135511E

Vandal resistant mask basic module + Anti-Vandal wall mounting box



9135511KE

1-basic module Vandal resistant mask with keypad + Anti-Vandal wall mounting box



9135515E

1-extending module Vandal resistant mask + Anti-Vandal wall mounting box

Notes

- Use these covers to make the basic units or sets with up to 11 buttons more resistant. Larger assemblies can be provided upon request.
- Be sure to use the more resistant version for flush mounting. No roof is required for outdoor applications of this version.

GSM and UMTS Connection Accessories

505004E

2N® VoiceBlue Lite

505214E

2N® VoiceBlue Enterprise

505612E

2N® UMTS Office Route

VoIP Connection Accessories

91378100

PoE injector

91378300

Grandstream VoIP telephone

91378350

Grandstream VoIP video telephone

Electric Locks

932070E

BEFO 1211 12V / 600 mA

932080E

BEFO 1221
with momentum pin

932090E

BEFO 1211MB
with mechanical blocking

Other Accessories

9137310E

Additional switch

Additional appliance control, normally open/closed contact option, time-unlimited connection, up to 48 V/2 A.

91341481E
91341481AU
91341481GB
91341481US

Adapter 12 V/2 A

A stabilised power supply has to be used if the Ethernet (PoE) power supply is not available.

932928E

12 V transformer

1.3 Terms and Symbols Used

Manual Symbols

Safety

- **Always** abide by this information to prevent injury of persons.

Warning

- **Always** abide by this information to prevent damage to the device.

Caution

- **Important information** for system functionality.

Tip

- Useful advice.

Note

- Additional information.

2 Description and Installation

This section describes the **2N® Helios IP** product and its installation.

Here is what you can find in this section:

- Product Description
- Before You Start
- Mounting – Mechanical Installation
- Mounting – Electrical Installation
- Connection of Extender Units

2.1 Before You Start

Product Completeness Check

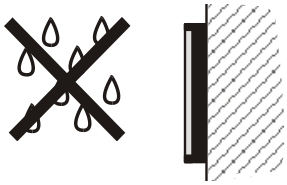
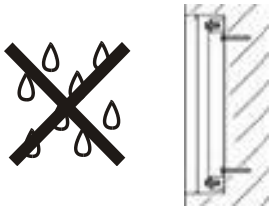
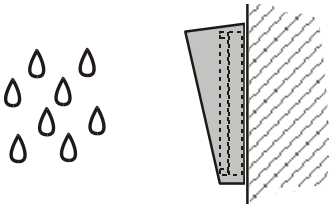
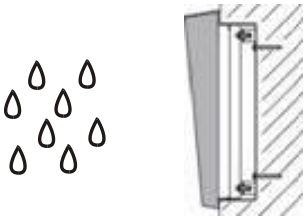
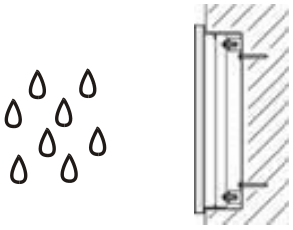
Please check whether the contents of the package of your new 2N® Helios IP complies with the following list.

- 1 2N® Helios IP
- 1 installation CD
- 1 spare seal
- 1 drilling template
- 1 hexagonal wrench
- 1 spare name plate
- 1 terminal block plug
- 2 screws
- 2 dowels

2.2 Mounting – Mechanical Installation

Overview of Installation Types

An overview of the installation types and the list of the required components are provided in the table below.

Overview of installation types	What you need for installation
Indoor, on surface	
	**2N® Helios IP** only
Indoor, flush mounting	
	**2N® Helios IP** box with 1-module frame **9135351E** or box with 2-module frame **9135352E**
Outdoor, on surface	
	**2N® Helios IP** Surface 1-module roof **9135331E** or Surface 2-module roof **9135332E**
Outdoor, flush mounting	
	**2N® Helios IP** Wall mounting box with 1-module roof **9135361E** or Wall mounting box with 2-module roof **9135362E**
With increased resistance	
	**2N® Helios IP** Vandal resistant mask with box, version according to the assembly

Indoor application means:

Indoor areas with a low relative air humidity value (e.g., hallways, offices and other heated rooms).

Indoor areas where **humidity condenses** on walls **but never flows down the walls** (porches, storage areas, industrial areas, e.g.).

Outdoor areas where **protection against rain and water flowing down the wall is provided** (sheds, passages. e.g.).

Outdoor application means:

Environments where the product is exposed to rain or where water may flow down the walls (fence, outer wall of a building, e.g.).

Caution

- The warranty shall not apply to product failures and defects caused by improper installation (contrary to these instructions). The manufacturer is neither liable for damages caused by theft within an area that is accessible after the attached electric lock is switched. The product is not designed as a burglar protection device except when used in combination with a standard lock, which has the security function.

Surface Mounting

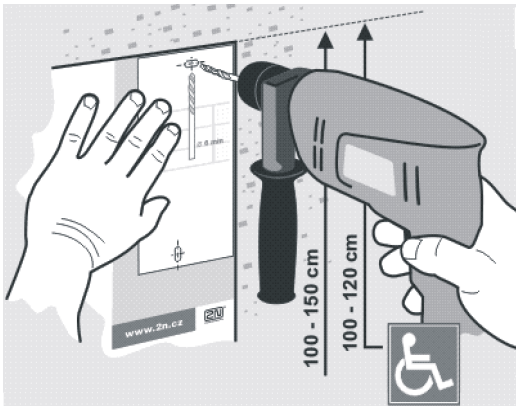


Figure 2.1 Hole Drilling

1. Drill holes according to the template included in the 2N® Helios IP supply. Insert the included dowels in the wall holes.
2. Use the hexagonal wrench included in the supply and remove the 2N® Helios IP metal cover. Remove the screw in the lower part of the metal cover and fold out the cover as shown in Figure 2.2.
3. Use a cross-head screwdriver to remove the plastic cover and demount the cover.

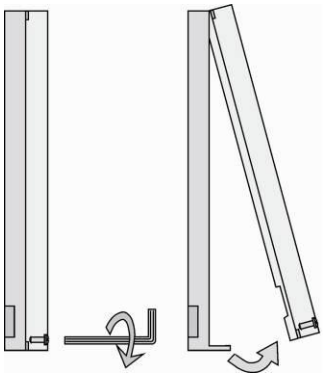


Figure 2.2 Cover Removing

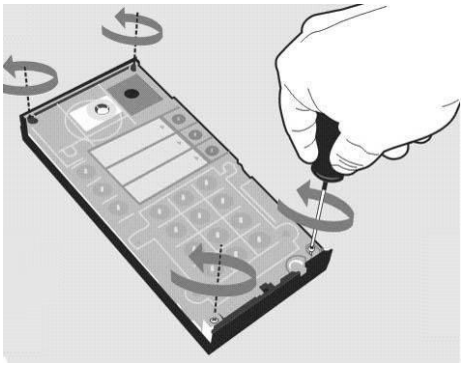


Figure 2.3 Plastic Cover Removing

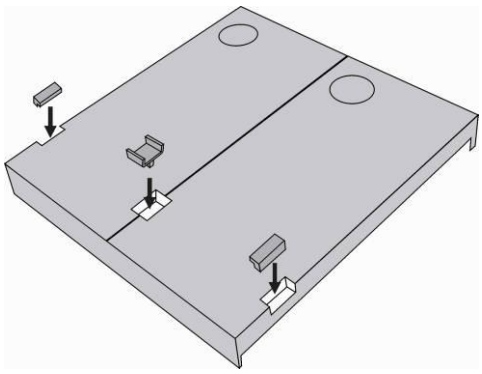


Figure 2.4 Multiple-Module Assembly

Warning

- Never remove the main board or camera electronics from under the lower cover while installing 2N® Helios IP. Do not disconnect the camera flat cable from the main board. Do not bend and press upon the flat cable either.

4. In multiple-module assemblies connect the boxes according to Figure 2.4, placing the basic module to the left and the extending modules to the right. The interconnecting cable shall be connected later!
5. Install blank modules on the unused side holes as shown in Figure 2.4.
6. If you are installing a roof module, put it on the wall now.
7. Fix 2N® Helios IP on the wall with screws as shown in Figure 2.6. Carry the supply cables (Ethernet, lock, power cables) to the basic module box through one of the holes.

Warning

- Make sure that the mounting surface for the 2N® Helios IP door communicator is perfectly flat. Avoid mechanical overload upon the bottom part of the cover. An incorrect installation on an uneven surface may lead to cover deformation and thus product malfunctions.

8. While installing a roof module, paste its top and side edges to the wall using silicon glue as shown in Figure 2.5 to prevent water from flowing into the box along or around the cables.
9. Connect the cables as described in subsection 2.4, Mounting – Electrical Installation. Make sure that the cables are not squeezed while installing the plastic cover. For the correct cable installation, refer to Figure 2.7.

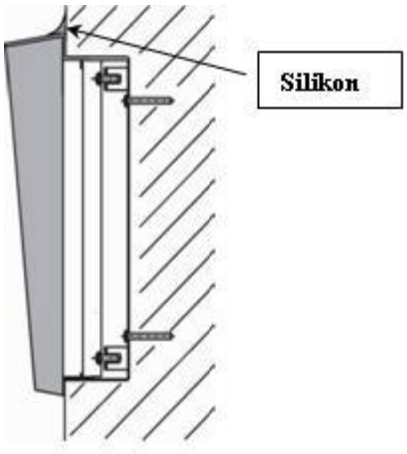


Figure 2.5 Roof Mounting

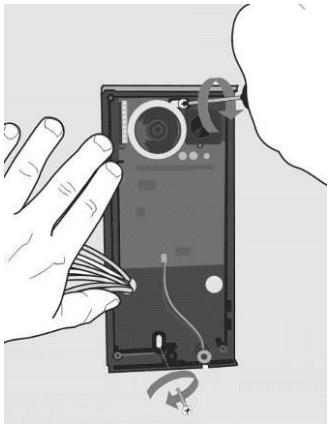


Figure 2.6 Wall Mounting

10. Remove the protective foil from the display (for display-equipped 2N® Helios IP versions only).
11. Make sure that the cables are placed properly inside and that none of them obstructs a perfect cover closure.
12. Make sure that the three loudspeaker holder feet fit into the board holes. Keep the required loudspeaker position to make the seal work properly.
13. Having mounted the unit on the wall and connected all cables, replace the plastic cover using cross-recessed screws.

Warning

- Remember to tighten all the four corner screws to fix the loudspeaker seal after electric installation to avoid water in-leak! A PH2 cross-head screwdriver is recommended.

14. Take out the name plates from the plastic cover as shown in Figure 2.8. Use a flat-bladed screwdriver, for example.
15. Remove the inserts from the name plates.
16. Insert the printed foil labels.
17. Put the inserts back in the name plates.
18. Replace the name plates, clicking them into position. The name plates hold the matt foil inserted underneath.
19. Check whether a silicon seal is inserted in the top groove of the plastic cover. A spare seal package is included.
20. Close the metal cover and fix it with screws.

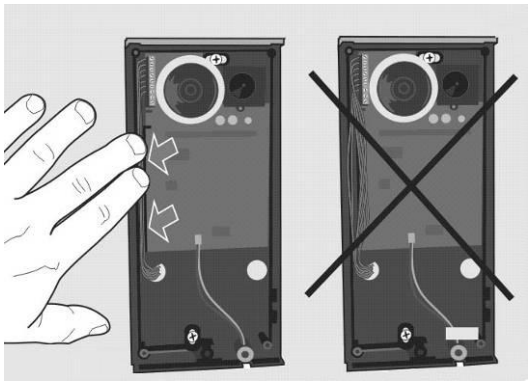


Figure 2.7 Cabling

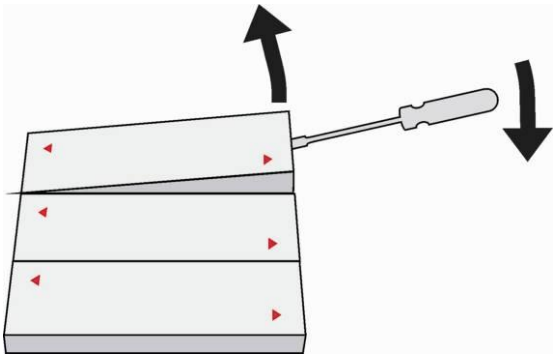


Figure 2.8 Name Plate Removing

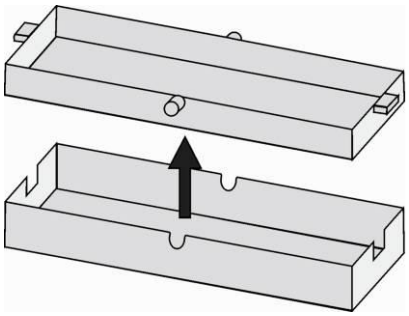


Figure 2.9 Insert Removing

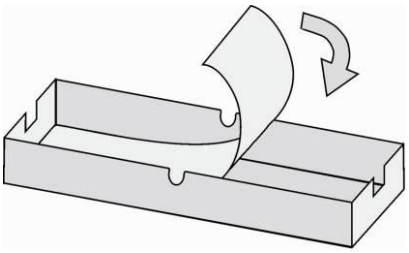


Figure 2.10 Label Inserting

Outdoor installation rules

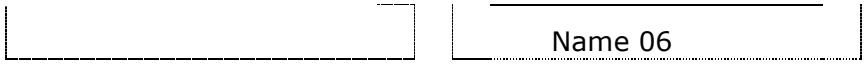
- Always connect button backlighting – it is used for heating.
- The joint between the roof module and the wall must be filled with a waterproof cement to prevent water in-leak (see Figure 2.5).
- Water must not leak in along or around the cables.

Name tag material and printing

Each 2N® Helios IP package includes a sheet of transparent foil for laser printing. Cut the printed foil into pieces and insert the labels in the name plates. Do not use paper to avoid water in-leak and paper damage.

Red arrows are printed on the name plate. Make sure that the text and the arrow do not overlap. We recommend you to use a template (MS Word) available at www.2n.cz for printing.

Single button (whole)	Double button (horizontally divided)
Name 01	Name 01 / Name 04
Name 02	Name 02 / Name 05
Name 03	Name 03



Flush Mounting

Follow the installation instructions included in the flush mounting box delivery.

Increased Resistance Version Installation

Follow the installation instructions included in the Anti-Vandal box delivery.

2.3 Mounting – Electrical Installation

2N® Helios IP is designed for connection in the Ethernet computer network (10/100BASE-T) using a UTP cable. Use a CAT 5e UTP cable at least for connection.

2N® Helios IP is fed through the PoE (Power over Ethernet) technology. No additional cabling is therefore necessary. If your Ethernet is not equipped with the PoE technology, it is possible to use a PoE injector, Part No. 91378100. As an alternative, you can use a power adapter, Part No. 91341481E. 2N® Helios IP is configured over an integrated administration web server, which can be controlled from any web browser, e.g., Mozilla Firefox.

Description of Printed Circuit Board Connectors

In **Figure 2.11** you can see the location of the printed circuit board (PCB) connectors. Connectors to which the accessories can be connected and connectors that serve for configuring 2N® Helios IP are indicated on the board. The UTP cable for the Ethernet connection is to be connected to the terminal block X2 as shown in **Table 2.1**. The terminal block can be removed from the PCB. The connection of each of the connectors is described in the subsections below.

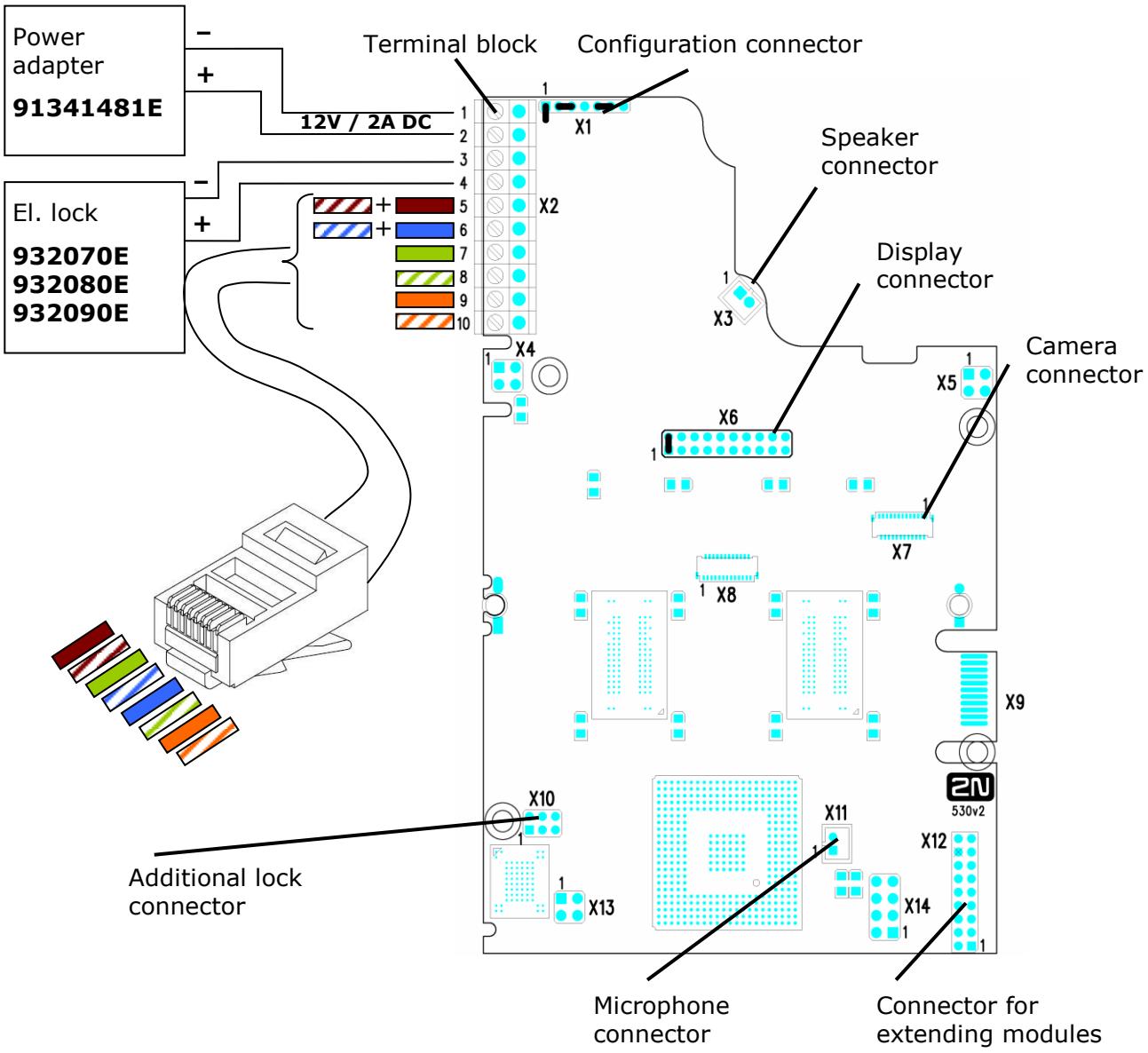


Figure 2.11 *Description of 2N® Helios IP connectors, PCB version 530v2*

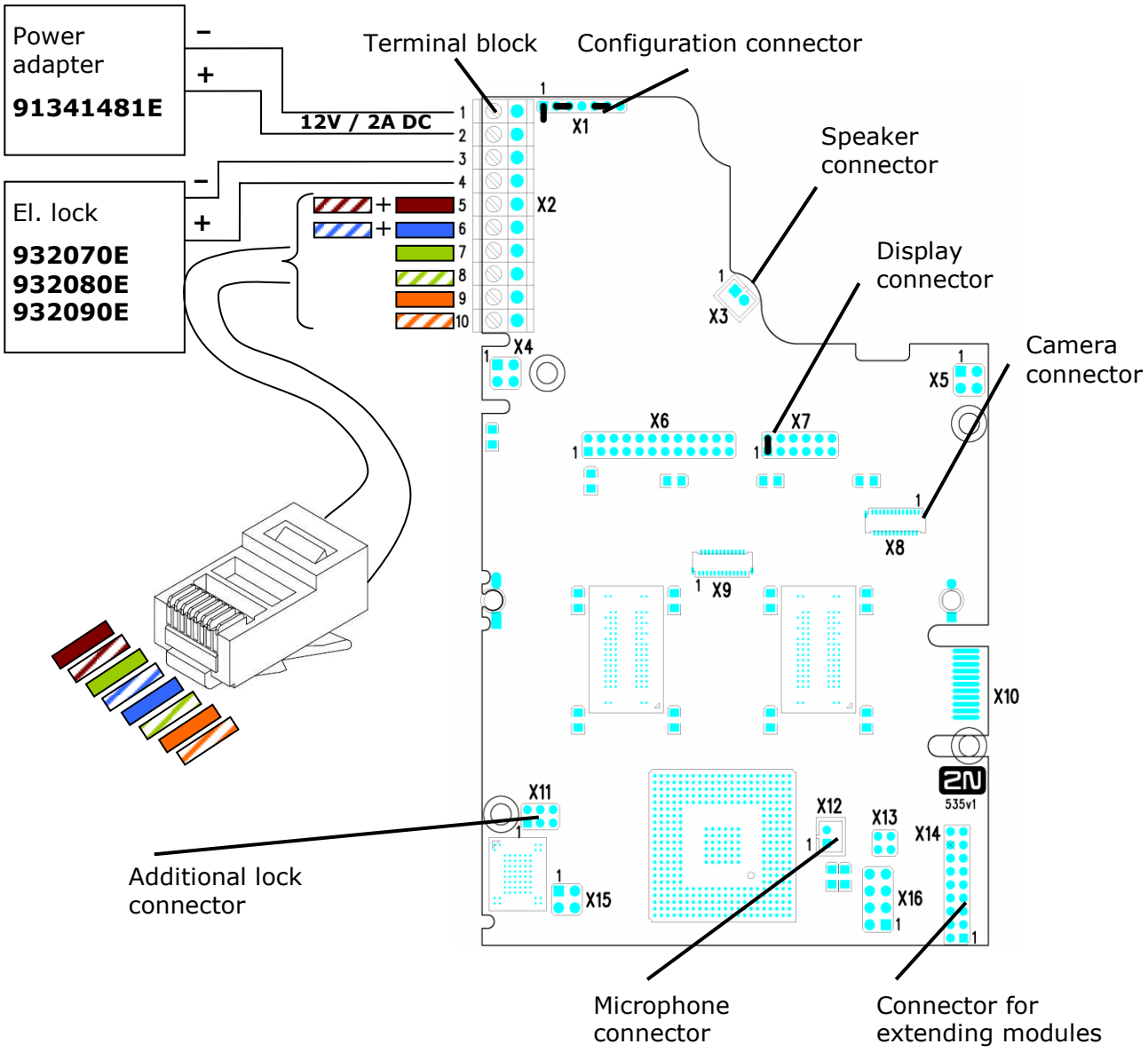


Figure 2.12 Description of 2N® Helios IP connectors, PCB version 535v1, 535v2

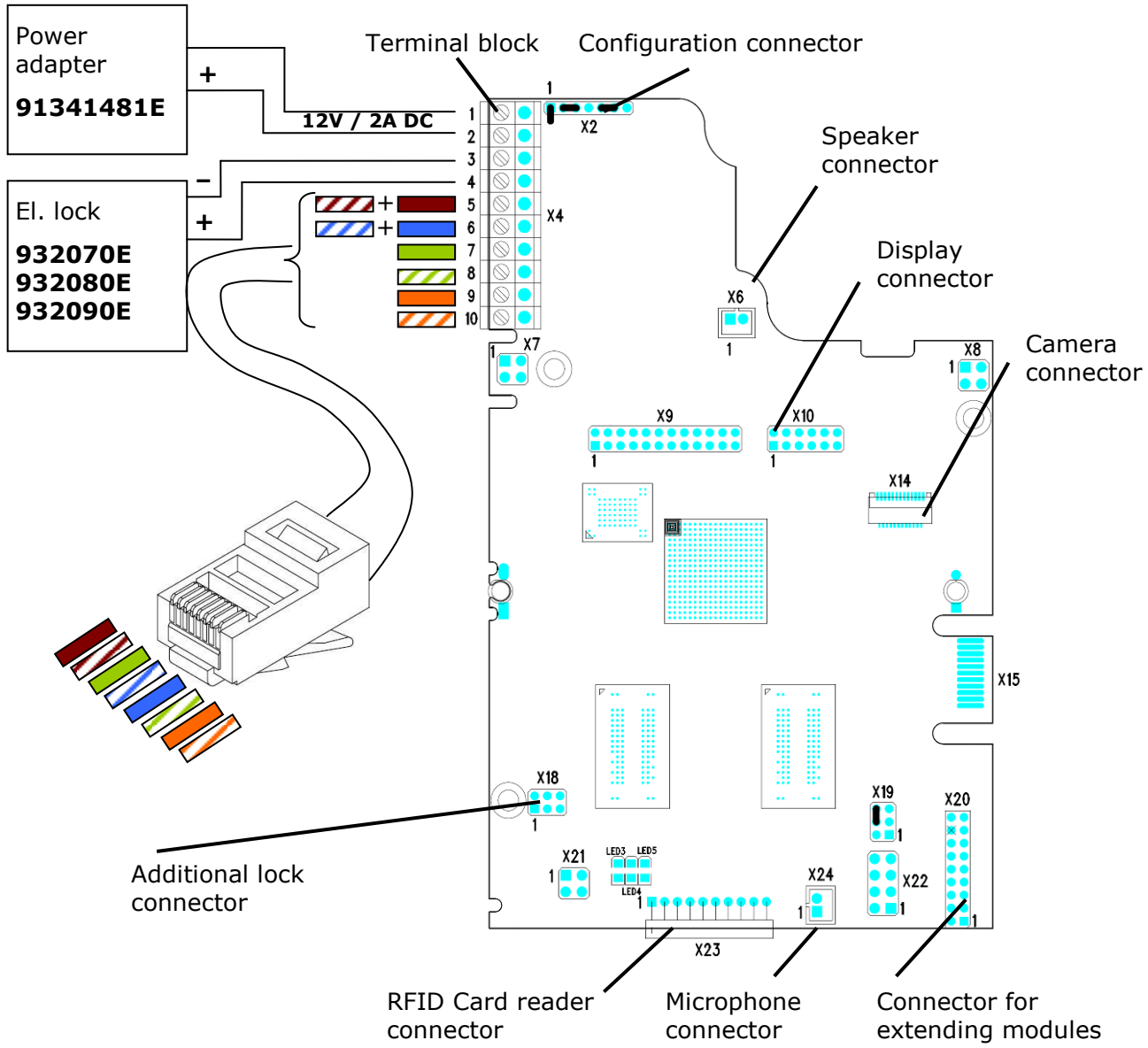


Figure 2.13 Description of 2N® Helios IP connectors, PCB version 535v5

Terminal Block X2 Connection

Terminal block X2 includes 10 terminals whose functions are distinguished by colour. Terminals 5–10 are used for connecting 2N® Helios IP to the Ethernet. Terminals 3–4 are designed for connecting the electric lock and terminals 1–2 help connect an external 12V / 2A DC power supply if no PoE power supply is available.

1. The terminal block is included in the package. To adjust an already installed 2N® Helios IP, disconnect it IP from the power supply. Then pull to remove the terminal block from the printed circuit board.
2. Insert the wires under the respective terminals.
3. Tighten the terminals using a flat screwdriver.
4. Replace the terminal block to the printed circuit board.

Caution

- Make sure that the cables leading through the 2N® Helios IP cover bottom groove are installed properly. For the correct installation of the cables refer to Figure 2.7.

Ethernet Connection

For the connections and meanings of the wires see the table below. Join UTP cable wires 4 (blue) and 5 (white-blue) and attach them under terminal 7 on 2N® Helios IP. In the same way, join wires 7 and 8 and place them under terminal 5 of 2N® Helios IP.

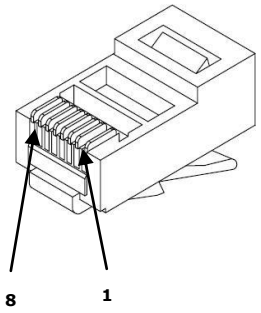
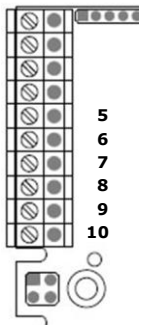
RJ-45				2N® Helios IP	
	Pin No.	Marking	Colour	Terminal No.	
	1	Tx+		10	
	2	Tx –		9	
	3	Rx+		8	
	4	PoE –		6	
	5	PoE –		6	
	6	Rx –		7	
	7	PoE +		5	
	8	PoE +		5	

Table 2.1 Terminal Block Connections

Electric Lock Connection

The electric lock can be connected to terminals 3 and 4 of terminal block X2.

Electric lock	2N® Helios IP			
	Marking	Colour	Terminal No	
 932070E **932080E** **932090E**	–		3	
	+		4	

Table 2.2 Terminal Block Connection for Electric Lock

Terminals 3 and 4 are connected to a relay on the 2N® Helios IP board. The relay terminals may act as normally open or normally closed contacts. Configuration is performed through the configuration connector X1 as described in the

Configuration Connector Connection subsection. Set on the configuration connector whether the electric lock will be powered from an external or internal power supply.

External Power Supply Connection

If the Ethernet network is not equipped with the PoE technology, you have two alternative options how to supply power to 2N® Helios IP.

1. Using a PoE injector, Part No. 91378100. 2N® Helios IP is then powered through an Ethernet cable as shown in Tab. 1 above.
2. Using a power adapter, Part No. 91341481E.

The external power supply from a power adapter can be connected to terminals 1 and 2.

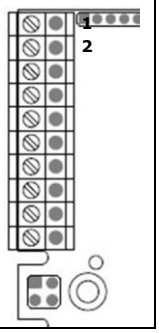
Electric lock	2N® Helios IP			
	Marking	Marking	Terminal No.	
91341481E	–		1	
	+		2	

Table 2.3 Terminal Block Connection for Power Adapter

Configuration Connector Connection

The configuration connector is located in the upper part of the printed circuit board. Use the configuration jumpers to set whether the lock control relay should have a normally open or normally closed function and whether it should powered internally or externally.

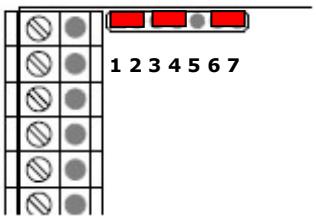
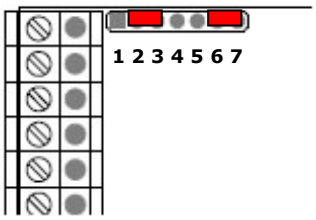
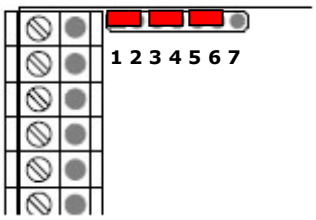
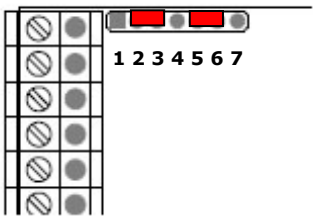
Lock power supply		Relay		Configuration connector
Internal	**External**	**Normally open**	**Normally closed**	**Connection of jumpers**
✓		✓		
	✓	✓		
✓			✓	
	✓		✓	

Table 2.4 Connection of Configuration Connector Jumpers

Display Connector

The display connector includes the name plate backlighting ON/OFF switching pins and 2N® Helios IP resetting pins. The remaining pins are intended for display connection.

2N® Helios IP resetting procedure

1. Switch 2N® Helios IP off.
2. Connect the jumper into the resetting (default setting) position (put the display switch into the F_RES position in the display-equipped models with 535v1 and 535v2 board versions).
3. Switch 2N® Helios IP on and wait for the acoustic start signalling.
4. Switch 2N® Helios IP off.
5. Remove the jumper from the resetting (default setting) position (put the display switch into the NORMAL position in the display-equipped models with 535v1 and 535v2 board versions).
6. Switch 2N® Helios IP on.

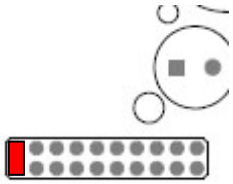
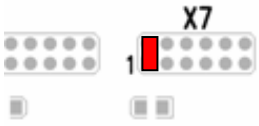
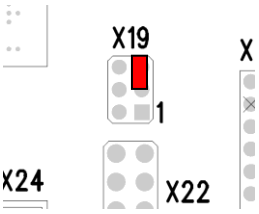
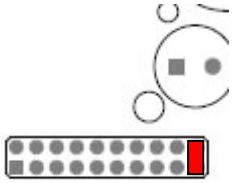
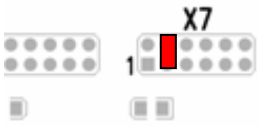
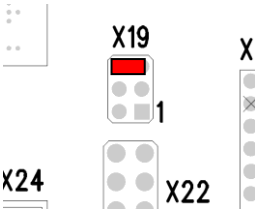
Normal operation	Default settings	Display connector X6 PCB version 530v2	Display connector X7 PCB version 535v1, 535v2	Connector X19 PCB version 535v5
✓				
	✓			

Table 2.5 Configuration Jumpers on Display Connector

To reset the default values of a display-equipped 2N® Helios IP, put the switch in the display right-hand bottom corner in position F_RES. This applies to modules with board versions 535v1 and 535v2 only. For 535v5 versions, use a jumper at connector X19.

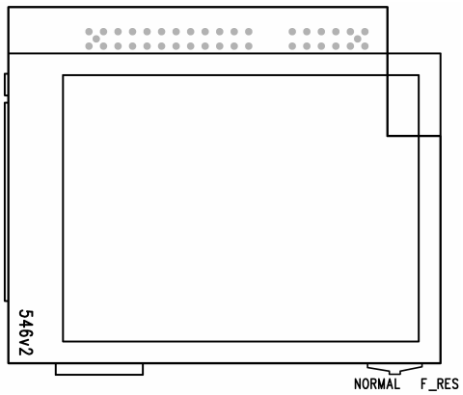


Figure 2.14 Resetting Procedure – Display Model

2.4 Mounting - Completion

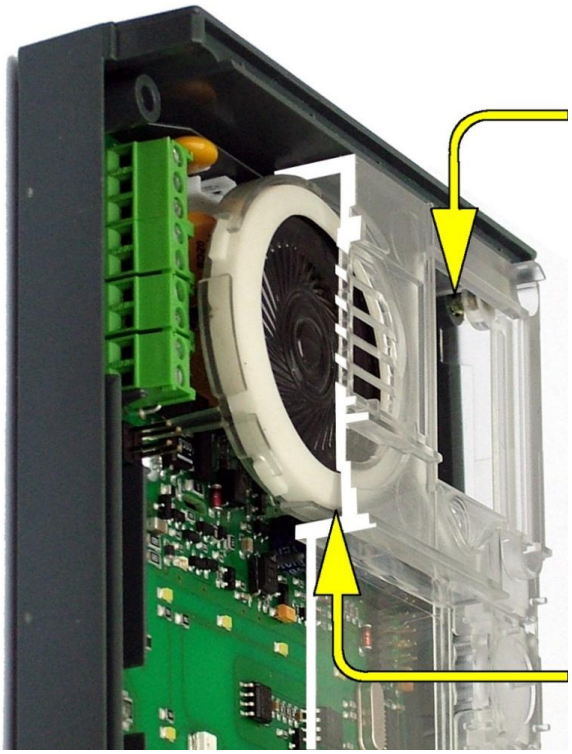
1. Remember to seal the 2N® Helios IP cable passage hole properly to avoid moisture in-leak and damage to electronics due to condensation.
2. Make sure that the wires inside 2N® Helios IP are not squeezed and insert the plastic top cover (a transparent plastic mould) carefully making its contacts plug into the electronics board connectors. Push the plastic cover into position moderately. If the part swings over an obstacle or one corner is higher than the others, remove the cover and find the obstacle. Then tighten the corner screws properly.
3. Mounting the metal sheet cover follow the steps included in the subsection dedicated to name plate removal. Make sure that the cover fits well and is perfectly flat. If its bottom part is loose, the mounting wall is probably uneven. Support the corners to avoid 2N® Helios IP bending.

Caution

- *An improper mounting may significantly deteriorate the button function.*
- A poor outdoor mounting may cause water in-leak and damage to the electronics.

Most Frequent Mounting Errors

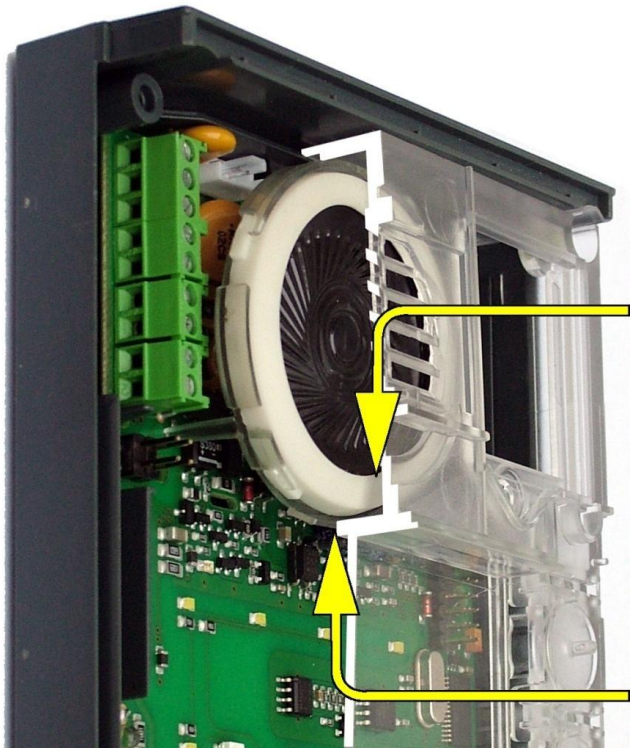
For illustration, a part of the plastic cover is removed in the figures below to reveal the sealed loudspeaker and the cover–seal touch point. The cross section plane is marked white for better orientation.



Poorly tightened screw
(a squeezed wire has the same effect)

WRONG

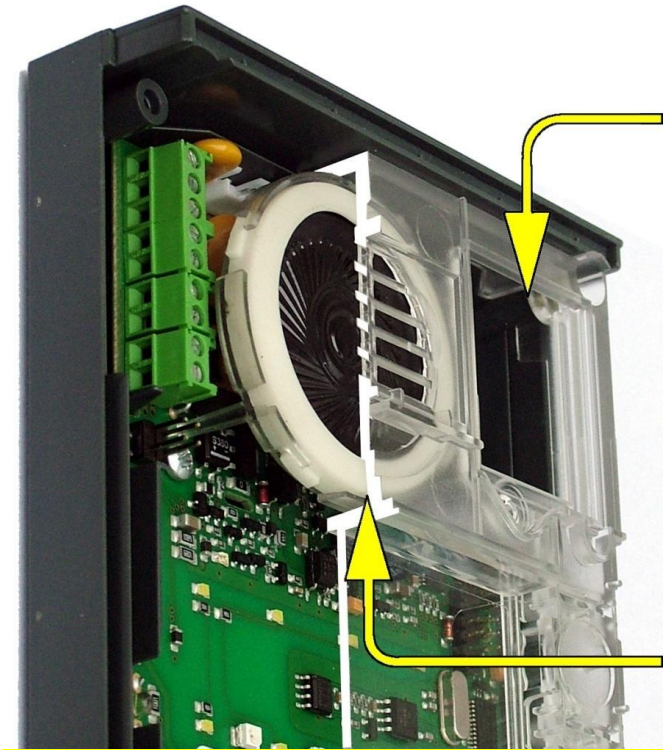
Gap between plastic cover and loudspeaker seal
- water may leak in and damage electronics



WRONG

Gap between plastic cover and loudspeaker seal
- water may leak in and damage electronics

If the loudspeaker support is in a wrong position, the plastic cover may catch the support brim (see the arrow) and, if treated roughly, lead to component deformations. Leakage may arise, see the upper arrow.



Properly tightened screw

RIGHT

The seal touches the plastic cover. Water flows out through a small hole (not shown in the figure).
Note: Water does not affect the loudspeaker Mylar membrane.

2.5 Extending Module Connection

2N® Helios IP features an easy installation of extending button modules. Extending modules are connected using a single cable (included in every extender delivery) in a chain pattern (every additional unit is connected with the previous one). Each extending module has two connectors – an input connector (for connection towards the 2N® Helios IP basic unit) and an output connector (for connection of another, more remote unit). Be sure to maintain the correct orientation of the units and avoid connector mismatch to ensure a proper function of the device!

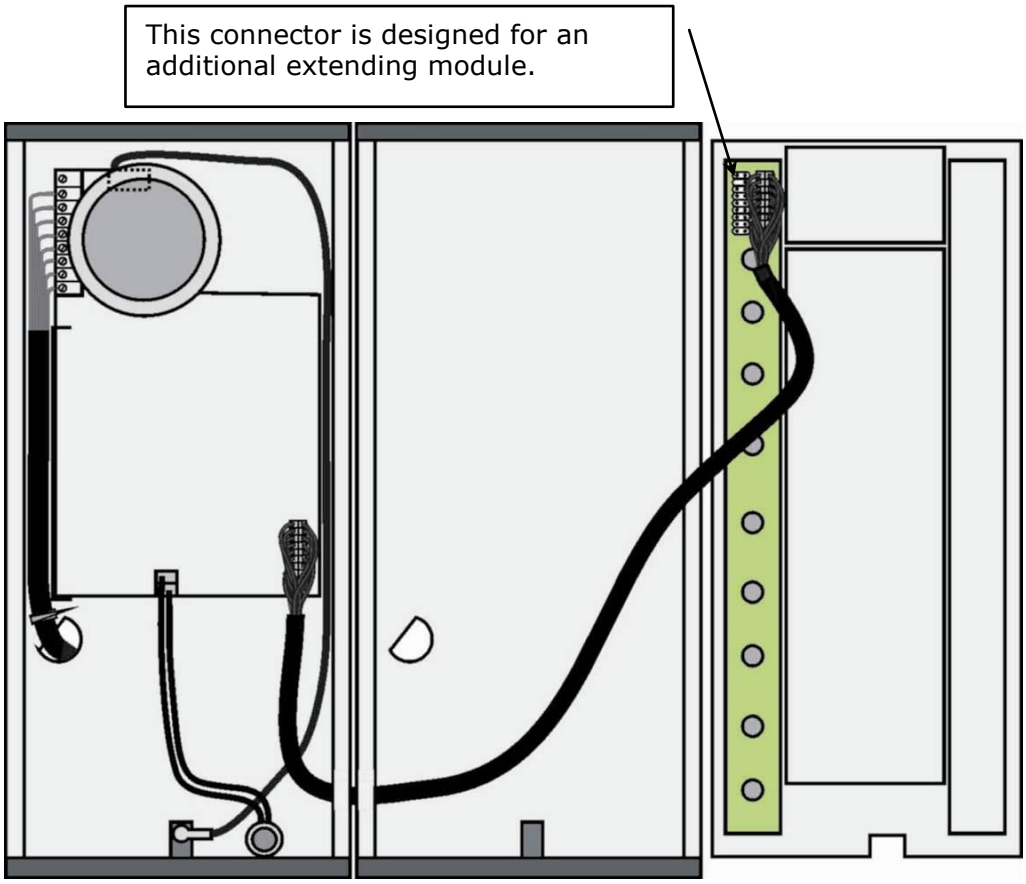


Figure 2.15 Connection of One-Row-Button Extending Modules

Maximum Count of Extenders

9135181E (1×8 buttons)	**6**	**5**	**4**	**3**	**2**	**1**	**0**
9135182E (2×8 buttons)	**0**	**0**	**1**	**1**	**2**	**2**	**3**

Table 2.6 Optional 2N® Helios IP Extension

The table above shows how to combine modules with single (whole) and double buttons.

Module Cable Interconnection

- The cable is included in every extending module delivery. Both its ends are the same. Configuration is 1:1. Connectors cannot be shifted or inserted conversely because they are equipped with a so-called key.
- The basic unit is always on the left. Extenders are chain-connected, i.e. each is linked with its neighbour.
- The cable cannot be driven through the box interconnecting holes until the boxes have been connected (see subsection 2.3 Mounting – Mechanical Installation).

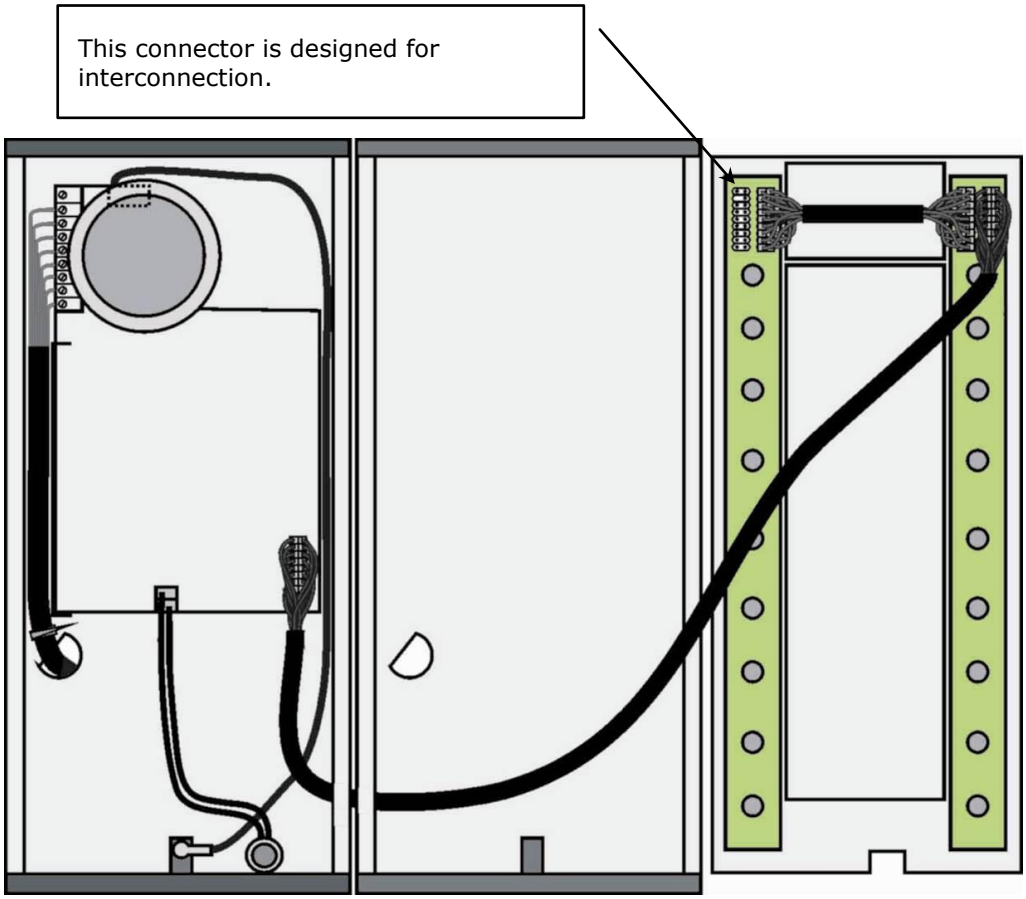


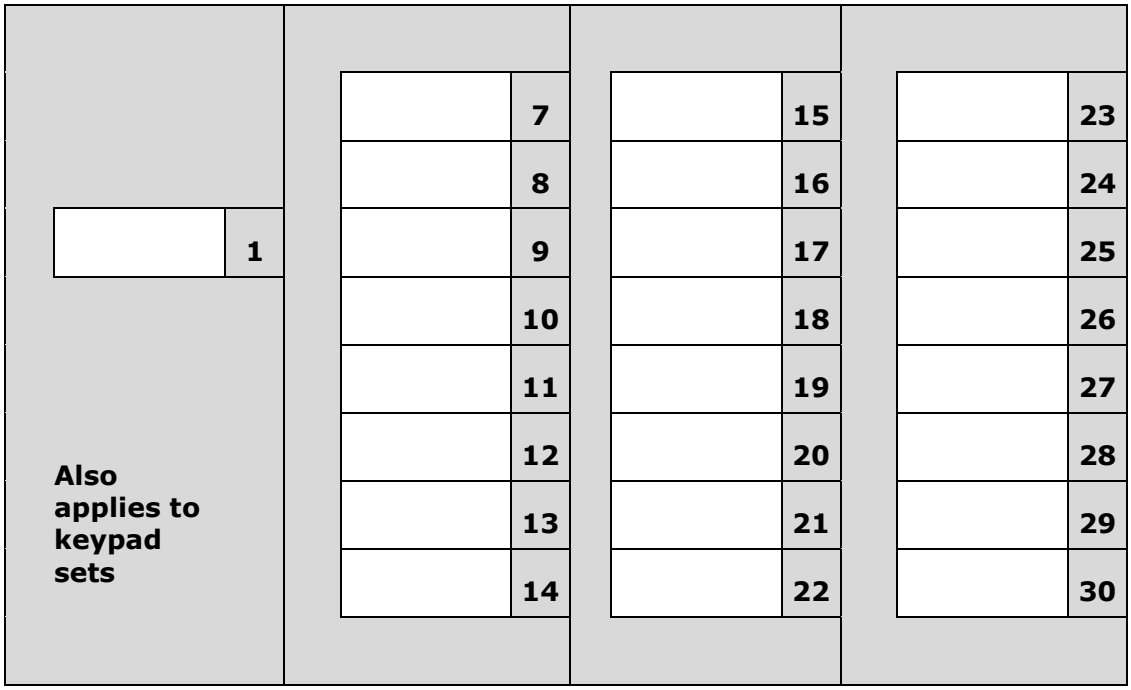
Figure 2.16 Connection of Two-Button-Row Extending Module

Caution

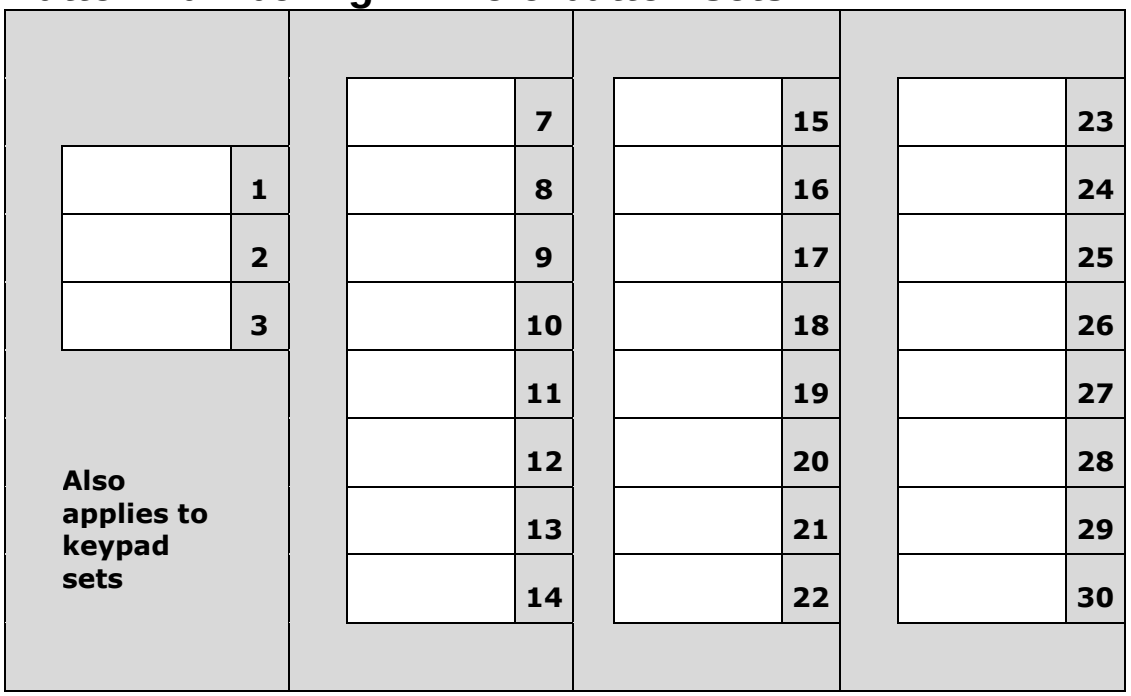
- The extending modules must be connected mutually and with the basic unit by means of a formed piece supplied with the extending module!!!

Button Numbering

Button numbering – one-button 2N® Helios IP with a whole-button set



Button numbering – whole-button sets



Button numbering – double-button set

			7		15	23		31	39		47
1		4	8		16	24		32	40		48
2		5	9		17	25		33	41		49
3		6	10		18	26		34	42		50
Also applies to keypad sets			11		19	27		35	43		51
			12		20	28		36	44		52
			13		21	29		37	45		53
			14		22	30		38	46		54

Caution

- For the time being, AntiVandal panels are available only for single-button sets with one extending module at most.

Button Numbering – Info Panel Sets

Installing the info panel name plate, Part No. 9135311E, into any of the extending modules will not change the numbering system (the buttons on the info panel sides will remain functional). Connecting the info panel module, Part No. 9135310E, will result in omission of eight numbers.

3 2N® Helios IP Configuration

This section describes the 2N® Helios IP configuration.

Here is what you can find in the section:

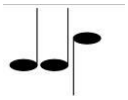
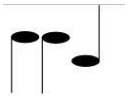
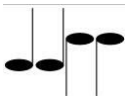
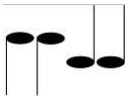
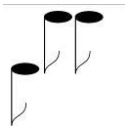
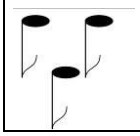
- Acoustic Signalling and Keypad Configuration
- Quick Configuration for Calling
- Configuration

3.1 Acoustic Signalling and Keypad Configuration

2N® Helios IP generates sounds to signal operational mode switching and changes.

There are different types of acoustic signals for each type of status change. The list of signals is included in Table 3.1.

Tone Signalling

Tones	Meaning
	**User activated** after entering the user activation code. The activation code is used for activating a user (a telephone directory position). For activation code setting refer to the Telephone Directory subsection
	**User deactivated** after entering the user deactivation code. The deactivation code is used for deactivating a user (a telephone directory position). A deactivated user may not be called but the call may, if necessary, be forwarded to a substitute if defined. For deactivation code setting refer to the Telephone Directory subsection.
	**Scheduler activated** used for scheduler activation. It can be used, for example, to enable alerting of a user group of users in an office. For activation code setting refer to the Scheduler subsection.
	**Scheduler deactivated** used for scheduler deactivation. It can be used, for example, to disable alerting a user group in an office and forward the call to a selected telephone number, or the reception or a cellular phone. For deactivation code setting refer to the Scheduler subsection.
	Call prolongation confirmation signalling a maximum call duration is set for blocking protection reasons, see the **Miscellaneous** subsection.
	**Internal application launched** after turning on or restarting of 2N® Helios IP, the internal application of 2N® Helios IP is launched. A successful launch is signalled by this tone combination.
	**Connected to LAN, IP address received** after the launch of the internal application 2N® Helios IP logs into the LAN. A successful login is signalled by this tone combination.

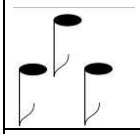
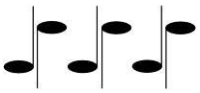
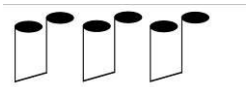
	**Disconnected from LAN, IP address lost** whenever the UTP cable is disconnected from 2N® Helios IP, this status is signalled by this tone combination.
	**Invalid telephone number or invalid unlocking code** you can dial an extension telephone number or enter the door-opening code using the keypad. An invalid code is signalled by this tone sequence.
	**Switching to default network parameters** after power up, a 30-second timeout is set for entering the resetting code. For switching to default network parameters refer to the Switching to Default Network Parameters – Static IP Address and Switching to Default Network Parameters – Dynamic IP Address subsections.
	Call end signalling a time limit can be set after which your call will be terminated. To prolong a call, push a VoIP telephone key. The time limit is set due to protection against call blocking.
	Connected call for VoIP phone-to-2N® Helios IP calling a short tone is played to signal call connection.

Table 3.1 List of Tone Signals

Switching to Default Network Parameters – Static IP Address

Switching to the default network parameters with the static IP address can be performed in two ways. Either through a web interface as described in the Network subsection or by pushing a combination of the quick dialling buttons as shown in Figures 3.1–3.3. Upon resetting, the web server is automatically switched on if switched-off before. The buttons have to be entered within 30 seconds after the internal application launch as signalled by the tone sequence. The maximum delay between the buttons is 2 s.

Figure 3.1 *Switching to Default Network Parameters – Static IP Address (Part Nos. 9137131E, 9137131CE, 9137131CKE)*

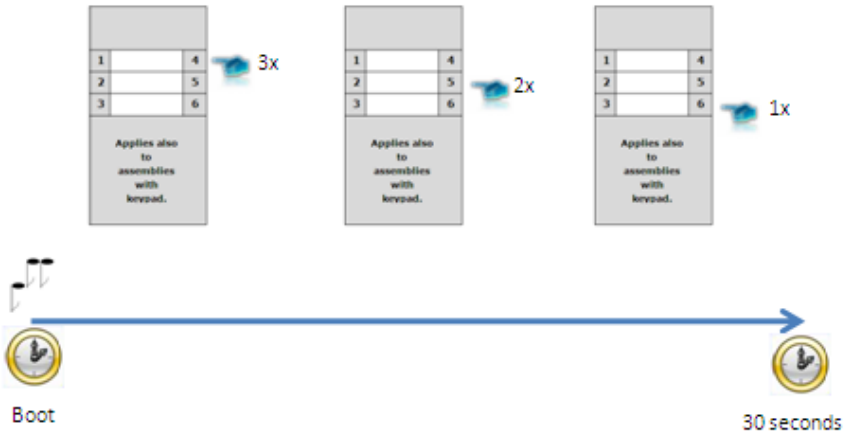


Figure 3.2 *Switching to Default Network Parameters – Static IP Address (Part Nos. 9137161E, 9137161CE, 9137161CKE)*

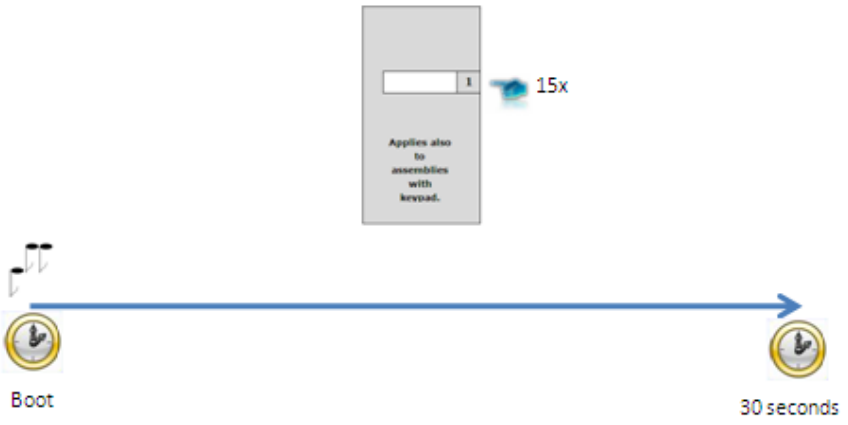


Figure 3.3 *Switching to Default Network Parameters – Static IP Address (Part Nos. 9137111E, 9137111CE, 9137111CKE)*

For one-button 2N® Helios IP modules (Part Nos. 9137111E, 9137111CE, 9137111CKE), pushing key 1 fifteen times within 30 seconds after the internal application launch results in turning on of the web server and switching the network parameters from the DHCP to the default static IP address and vice versa.

Switching to Default Network Parameters – Dynamic IP Address

Switching to the default network parameters with the dynamic IP address can be performed in two ways. Either through a web interface as described in the Network subsection or by pushing a combination of the quick dialling buttons as shown in Figures 3.4–3.6. Upon resetting, the web server is automatically switched on if switched-off before. The buttons have to be entered within 30 seconds after the internal application launch as signalled by the tone sequence. The maximum delay between the buttons is 2 s.

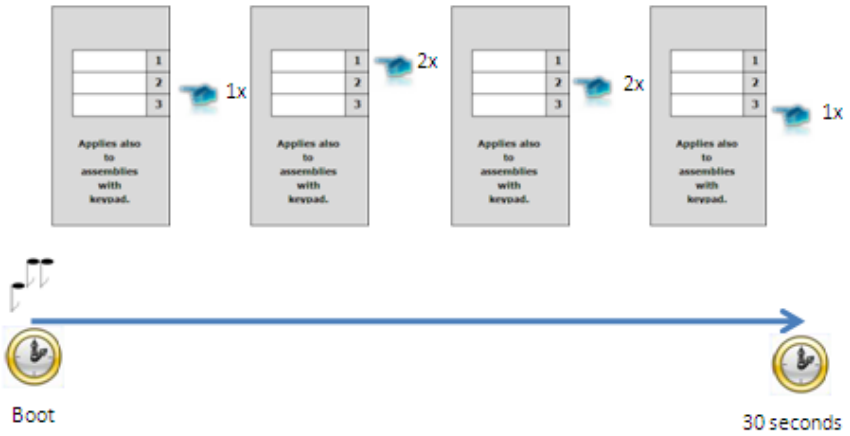


Figure 3.4 *Switching to Default Network Parameters – DHCP (Part Nos. 9137131E, 9137131CE, 9137131CKE)*

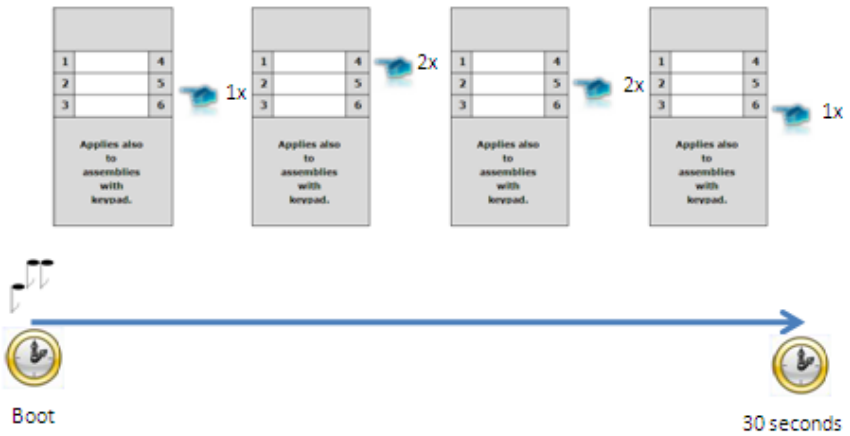


Figure 3.5 *Switching to Default Network Parameters – DHCP (Part Nos. 9137161E, 9137161CE, 9137161CKE)*

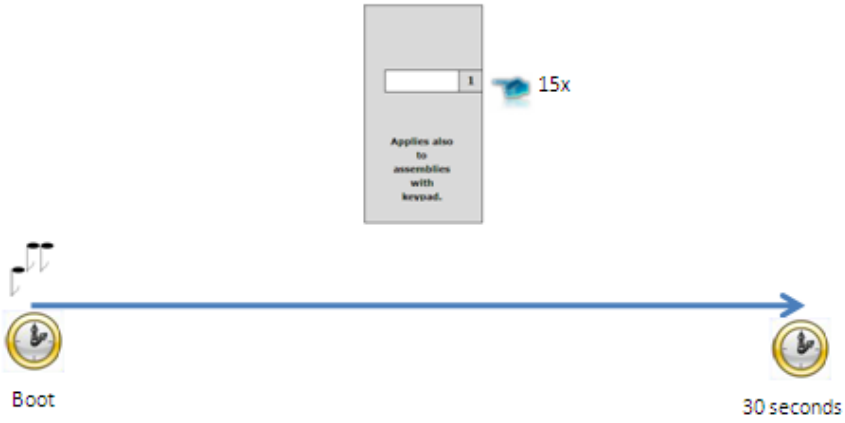


Figure 3.6 *Switching to Default Network Parameters – DHCP (Part Nos. 9137111E, 9137111CE, 9137111CKE)*

For one-button 2N® Helios IP modules (Part Nos. 9137111E, 9137111CE, 9137111CKE), pushing key 1 fifteen times within 30 seconds after the internal application launch as signalled by the tone sequence results in turning on of the web server and switching the network parameters from the default static IP address to the dynamic address and vice versa.

Web Server Switch On

If the web server is switched off, switch it on using the quick dialling buttons of the 2N® Helios IP basic module as described in Figures 3.7–3.9. The buttons have to be entered within 30 seconds after the internal application launch as signalled by the tone sequence. The maximum delay between the buttons is 2 s.

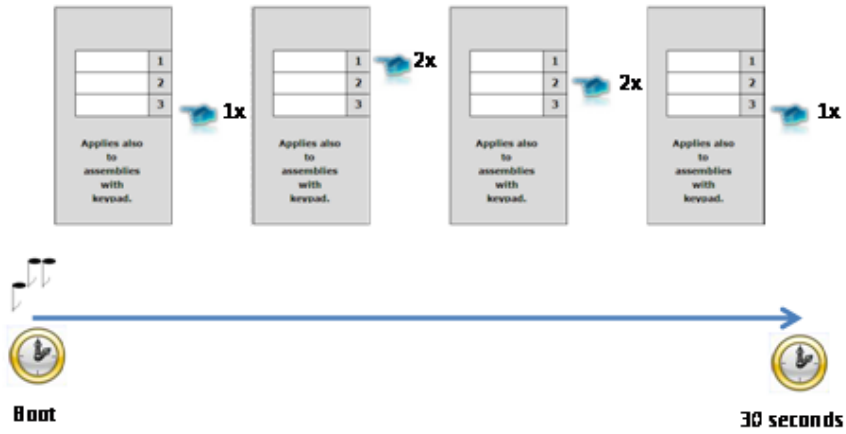


Figure 3.7 *Switching on Web Server Using Quick Dialling Buttons (Part Nos. 9137131E, 9137131CE, 9137131CKE)*

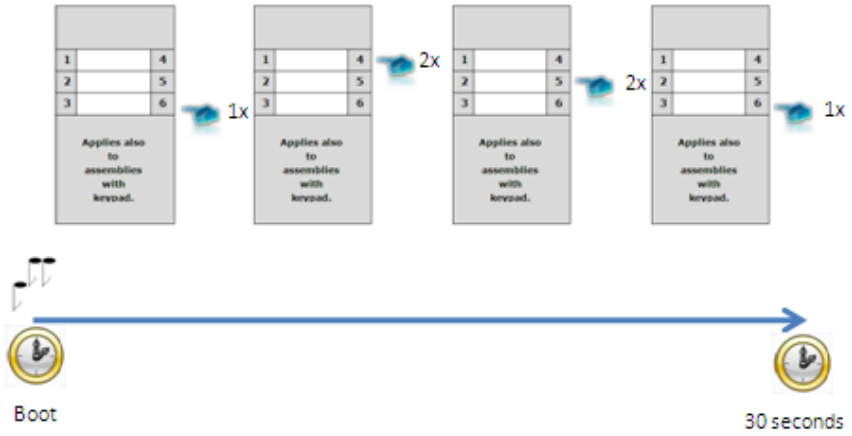


Figure 3.8 *Switching on Web Server Using Quick Dialling Buttons (Part Nos. 9137161E, 9137161CE, 9137161CKE)*

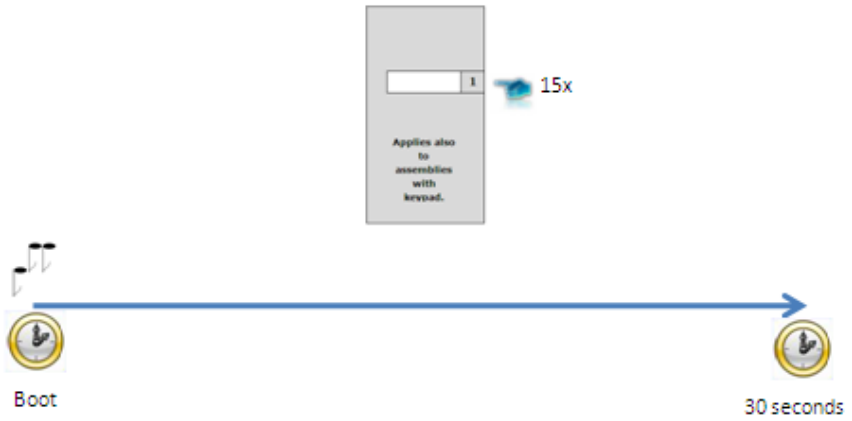


Figure 3.9 *Switching Web Server Using Quick Dialling Buttons (Part Nos. 9137111E, 9137111CE, 9137111CKE)*

For one-button 2N® Helios IP modules (Part Nos. 9137111E, 9137111CE, 9137111CKE), pushing key 1 fifteen times within 30 seconds after the internal application launch as signalled by the tone sequence results in turning on of the web server and switching the network parameters from the default static IP address to the dynamic address and vice versa.

3.2 Quick Configuration for Calling

This section describes the most common and convenient way of configuration. For details on the configuration parameters refer to the subsections below.

Language Selection

Before starting to configure, select the administration web server language using the folder menu in the right-hand upper corner of the screen.

Network Settings

If you have not set the IP address obtaining from the DHCP server, change the default IP address of your 2N® Helios IP. To set the IP address, use the *Other settings –> Network menu* as shown in the Network subsection.

Static Parameter Setting

For Windows OS users: to know your network parameters, enter in the command line: `ipconfig –all`.

Static IP address

Set the IP address assigned by your LAN administrator.

Network mask

Set the network mask.

Default gateway

Set the default network gateway.

Primary DNS

Set the primary Domain Name Server IP address for your LAN.

Secondary DNS

Set the secondary Domain Name Server IP address for your LAN.

SIP Parameter Setting

Set your VoIP network parameters to make calls from your 2N® Helios IP. To do this, use the *Other settings –> SIP setting* menu.

Display name
Set the name to be displayed to the called subscriber. The name will also be displayed in the right-hand upper corner of the web interface and used for 2N® Helios IP identification in the 2N® Helios IP Network Scanner application.

User ID
Set the user name to be used for registration.

Domain
Set the domain name or IP address of the server to be used for calling.

Use authorisation ID
Define whether the authorisation ID or user ID shall be used for authorisation.

Authorisation ID
Set the authorisation ID to be used for authorisation if the Use authorisation ID is set to Yes.

Password
Define the authorisation password for registration and calling.

Local SP port
Set the port to be used by 2N® Helios IP for SIP signalling.

Proxy address
Set the SIP proxy address to be used by 2N® Helios IP for calling.

Proxy port
Set the SIP proxy communication port for SIP signalling.

2N® Helios IP registration
Define whether 2N® Helios IP should register at the SIP proxy.

Registration restricted to:
Set the time for 2N® Helios IP registration.

Registrar address:
Set the registrar address.

Registrar port:
Set the registrar communication port.

Telephone Directory Setting

The telephone directory menu is used for configuring the quick dialling buttons (*Basic settings –> Telephone directory*). The telephone directory contains 999 positions (only 54 positions are supported in the 9137131(CK), 9137161(CK) and 9137111(CK) models, 999 positions are supported after the licence key is inserted, Part No. 9137901). The first 54 positions correspond to the quick dialling buttons of 2N® Helios IP and the buttons of the extending modules attached (see the Extending modules subsection). To retrieve the remaining positions, use the numeric keypad if available. To select a telephone directory position, use the upper navigation bar with button numbers. For numbering of 2N® Helios IP buttons, including extending module buttons, refer to the Button Numbering subsection. To move between the positions, either use the arrow keys or enter the position number and push the *Move to* button (see Figure 3.10).

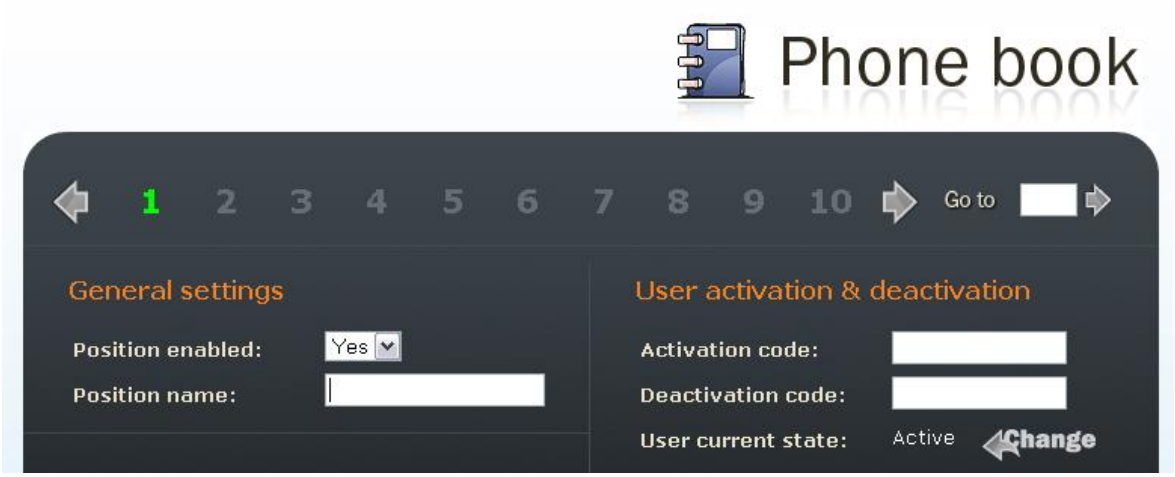


Figure 3.10 Telephone Directory Navigation Bar

Position enable

The **Position enable** switch defines whether the particular position is enabled or disabled. You have to enable a position to dial its telephone number. To select a position status, either push a quick dialling button (for positions 1–54) or enter the position number using the 2N® Helios IP numeric keypad.

Position name

Here enter a personal name for the selected telephone directory position. This parameter is optional and facilitates the telephone directory search.

Telephone numbers

Enter up to three telephone numbers for a selected telephone directory position. These numbers are called sequentially, one after another.

Number 1, 2 and 3:

Enter the station telephone number to which the call should be forwarded. If the station number included in Number 1 fails to answer, the call will be forwarded automatically to Number 2, and so on. For the call forwarding timeout refer to the Miscellaneous subsection.

It is unnecessary to define the remaining parameters for a quick configuration. For details on the parameters necessary for a detailed configuration, refer to the subsections below.

Lock Setting

To set the lock 1 codes use the *Basic settings –> Lock 1* menu.

Lock setting

Set whether and for how long the lock should be active after the correct unlocking code has been entered.

Lock codes

Enter the lock 1 opening codes for 2N® Helios IP. If a code matches another code entered earlier in 2N® Helios IP, press ✖. The symbol will appear next to the code.

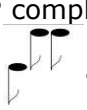
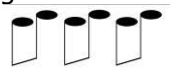
Having completed the configuration, restart 2N® Helios IP, refer to the appropriate subsection. From now on, 2N® Helios IP is ready to make calls.

3.3 Configuration

2N® Helios IP is configured through an integrated administration web server. Connect 2N® Helios IP to the IP network and make sure that 2N® Helios IP is powered.

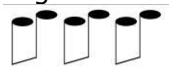
IP Address Obtaining from DHCP

By default, obtaining the IP address from the DHCP server is selected in 2N®Helios IP. After power up, 2N® Helios IP automatically receives the IP address from the DHCP server. If you do not have access to the DHCP server, you can find the IP address received with the HeliosIPNetScanner program, which is available on the installation CD. If 2N® Helios IP is switched to the static IP address mode, switch it to the DHCP IP address obtaining mode as follows:

1. Power on 2N® Helios IP.
2. Wait until 2N® Helios IP completes the booting process. The end is signalled by a sequence of tones  .
3. Within 30 seconds push the buttons as described in the Switching to Default Network Parameters – Dynamic IP Address subsection.
4. Switching to the DHCP IP address obtaining mode is signalled by a sequence of tones  .
5. Wait until the device is restarted.

Manual IP Address Setting

If the DHCP server is unavailable, you can set a default static IP address in your 2N® Helios IP. Proceed as follows:

1. Power on 2N® Helios IP.
2. Wait until 2N® Helios IP completes the booting process. The end is signalled by a sequence of tones .
3. Within 30 seconds push the buttons as described in the Switching to Default Network Parameters – Static IP Address subsection.
4. Switching to the default static IP address mode is signalled by a sequence of tones  .
5. Wait until the device is restarted.
6. Now, 2N® Helios IP has the following network parameters:

IP address:	192.168.1.100
Network mask:	255.255.255.0
Default gateway:	192.168.1.1

Description of 2N® Helios IP Network Scanner

The purpose of this application is to find the dynamic IP address of 2N® Helios IP in the local IP network. The application is available on the installation CD, which is part of the 2N® Helios IP package. Microsoft NET Framework 2.0 is required for installation.

1. Run the 2N® Helios IP Toolkit installer.
2. The installation wizard will guide you through the installation.

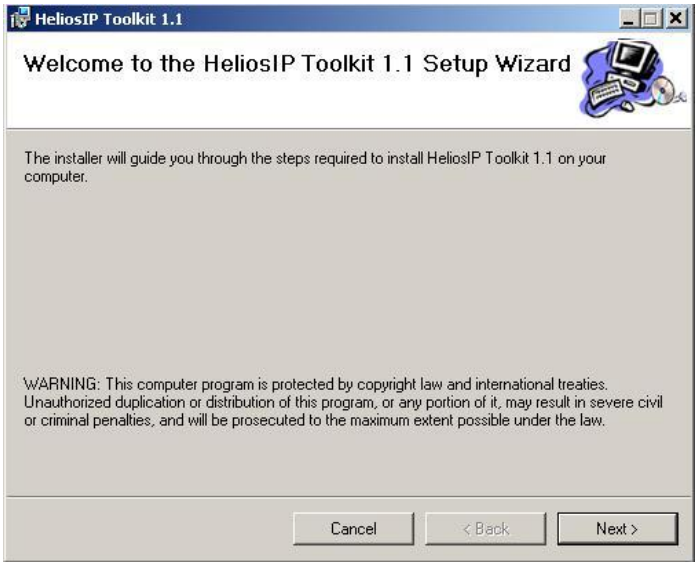

HeliosIP Toolkit 1.1
Welcome to the HeliosIP Toolkit 1.1 Setup Wizard
The installer will guide you through the steps required to install HeliosIP Toolkit 1.1 on your computer.
WARNING: This computer program is protected by copyright law and international treaties. Unauthorized duplication or distribution of this program, or any portion of it, may result in severe civil or criminal penalties, and will be prosecuted to the maximum extent possible under the law.
Cancel
< Back
Next >

Figure 3.11 2N® Helios IP Network Scanner Installation Wizard

3. After installing the 2N® Helios IP Network Scanner application, run the application using the *Start* menu of the Microsoft Windows operating system.
4. Upon launch, the application starts searching the LAN automatically for all 2N® Helios IP communicators with an assigned or statically set IP address. The communicators are then listed in a table.

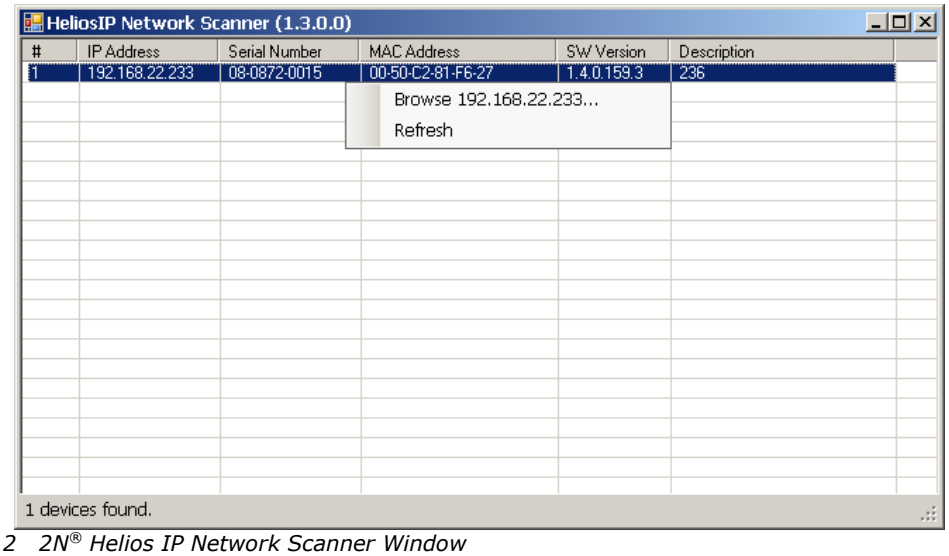

HeliosIP Network Scanner (1.3.0.0)
IP Address Serial Number MAC Address SW Version Description
1 192.168.22.233 08-0872-0015 00-50-C2-81-F6-27 1.4.0.159.3 236
Browse 192.168.22.233...
Refresh
1 devices found.

Figure 3.12 2N® Helios IP Network Scanner Window

5. Select the 2N® Helios IP communicator to be configured. Click on it with the right-hand mouse button and select *Browse...* to open the web browser window, log in to 2N® Helios IP and start configuring as described in the Login subsection below.

Login

In the web browser enter the IP address of 2N® Helios IP. Subsequently, a login screen will be displayed. The default login username and password are as follows:

Username: Admin

Password: 2n

If the login screen does not appear, an incorrect IP address was entered into the web browser or the 2N® Helios IP administration web server was turned off. If you are not sure of the IP address of 2N® Helios IP, use the 2N® Helios IP Network Scanner application as described in the Description of 2N® Helios IP Network Scanner subsection.

Find how to switch on the administration web server in the Web Server Switch-On subsection. Please check the IP address entered, or, if applicable, check the way the IP address was obtained as described at the beginning of subsection 3.1., Acoustic Signalling and Keypad Configuration.

Language Selection

You can select the language using the tag menu in the right-hand upper corner as shown in Figure 3.13.

Figure 3.13 Language Selection

Information

In this subsection find the basic information on the respective 2N® Helios IP system.

Figure 3.14 Basic Information

Software version – the current 2N® Helios IP firmware version. For firmware update refer to the

Auto Update subsection.

Bootloader version – the bootloader version.

Hardware version – the 2N® Helios IP hardware version.

Serial number – the product serial number.

MAC address – the Ethernet interface address.

Uptime – the period of time since the last restart.

Registration status – the current 2N® Helios IP-to-SIP proxy registration status:

- **In progress** – registration in progress.
- **Registered** – 2N® Helios IP is registered to the SIP proxy.

- **Not registered** – 2N® Helios IP is not registered to the SIP proxy.

Registration at – the IP address or domain name of SIP proxy to which 2N® Helios IP is registered.

Registration time – registration date and time.

Call state – the current call status:

- **Inactive** – system inactive;
- **Call set-up** – call being set up;
- **Ringing** – ringing at VoIP phone;
- **Incoming** – VoIP phone-to-2N® Helios IP call being set-up;
- **Outgoing** – 2N® Helios IP-to-VoIP phone call being set-up.

Opponent – displays the SIP address called from 2N® Helios IP.

Call duration – the current call duration.

Audio codec – the audio codec used for the current call.

Video codec – the video codec used for the current call.

DHCP status – displays whether the obtaining of the IP address from the DHCP server is on.

IP address – the current IP address of 2N® Helios IP.

Net mask – the current subnet mask.

Default gateway – the current default network gateway.

Primary DNS – the current primary Domain Name Server.

Secondary DNS – the current secondary Domain Name Server.

Ethernet frames transmitted – the count of Ethernet frames transmitted.

Ethernet frames received – the count of Ethernet frames received.

Ethernet frames dropped – the count of Ethernet frames dropped due to damage.

UDP packet transmitted – the count of UDP packets transmitted.

UDP packet received – the count of UDP packets received.

UDP packet dropped – the count of UDP packets dropped due to damage.

TCP packet transmitted – the count of TCP packets transmitted.

TCP packet received – the count of TCP packets received.

TCP packet dropped – the count of TCP packets dropped due to damage.

Telephone Directory

To set the telephone directory, use the *Basic settings –> Telephone directory* tag. The telephone directory includes 999 records – positions. Typically, one position corresponds to one user. You can assign up to three phone numbers to each position/user.

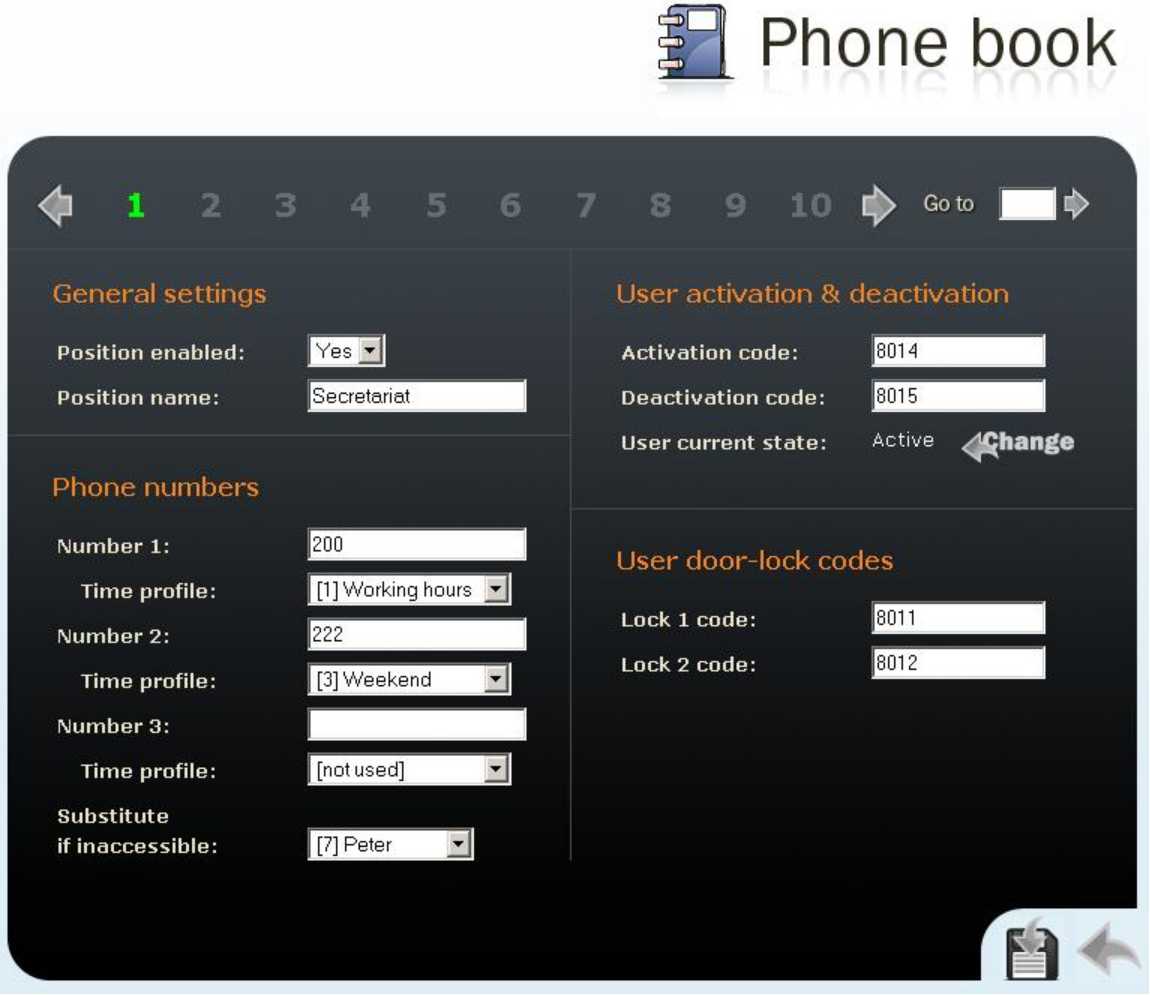


Figure 3.15 Telephone Directory

To move between the positions either use the arrow buttons, or enter the position number and push the *Move to* button in the right-hand upper corner.

The first 54 positions are the same as the quick dialling buttons on 2N® Helios IP and buttons on the extending modules (refer to the Button Numbering subsection). For the other positions use the numeric keypad if available in your 2N® Helios IP.

General Settings

Position enabled

Here select whether the selected telephone directory position shall be enabled or disabled. Remember to enable a position to call to its number.

Position name

Enter the name of the person to be assigned to a selected telephone directory position. This parameter is optional and helps you search the telephone directory more easily.

Telephone Numbers

Here define up to three telephone numbers to be called one after another when a quick dialling button or keypad is used.

Numbers 1,2 and 3

Enter the telephone number to which the call is to be routed. If the call is not answered by the station with the telephone number specified under Number 1, it will be forwarded automatically to the telephone number specified under Number 2 and so on.
2N® Helios IP also allows for direct calling in the format sip:user_id@domain:port, e.g.: sip:200@192.168.22.15:5062 or sip:name@yourcompany.

Time schedule

Assign a time schedule to a telephone number for validity management. Refer to the Scheduler subsection for details on time schedule settings.

Substitute if inaccessible

Enter the person to whom the call will be routed if the original person is not reached (for Part Nos. 9137131(CK)E, 9137161(CK)E, 9137111(CK)E with a proper licence key only, Part No. 9137901).

User Activation and Deactivation

Here set the user activation and deactivation codes. The user may activate or deactivate 2N® Helios IP using the user telephone or numeric keypad. If just one code is set, or both the codes are the same, the current user status will be switched after code entering. You can verify the selected status by a sound signalling. Together with the scheduler settings, the user activation and deactivation define whether a call will be established for the given telephone number (for Part Nos. 9137131(CK)E, 9137161(CK)E and 9137111(CK)E with a licence key only, Part No. 9137901).

User Door Lock Codes

Write the user codes for 2N® Helios IP unlocking. Each user may be assigned two unique codes for lock 1 and 2 opening. If the codes are identical with other codes already entered in 2N® Helios IP, the following mark will appear with the respective codes: ✖ (for Part Nos. 9137131(CK)E, 9137161(CK)E and 9137111(CK)E a licence key is required, Part No. 9137901).

Scheduler

The scheduler helps you set conditioned calling to user numbers. In case a user is not present, 2N® Helios IP need not set up a call to his or her telephone number but can automatically call other telephone numbers in the directory or the substitute number. Each user number can be assigned a scheduler – profile. A total of 20 profiles can be shared by the users (for Part Nos. 9137131(CK)E, 9137161(CK)E, 9137111(CK) this number is 3, or 20 with a licence key only, Part No. 9137901). There are two possible ways of profile validity condition setting: time setting in the Time schedule, or manual setting of the profile activation and deactivation codes. For you to use both the functions at the same time, the two conditions must be met at the same time.

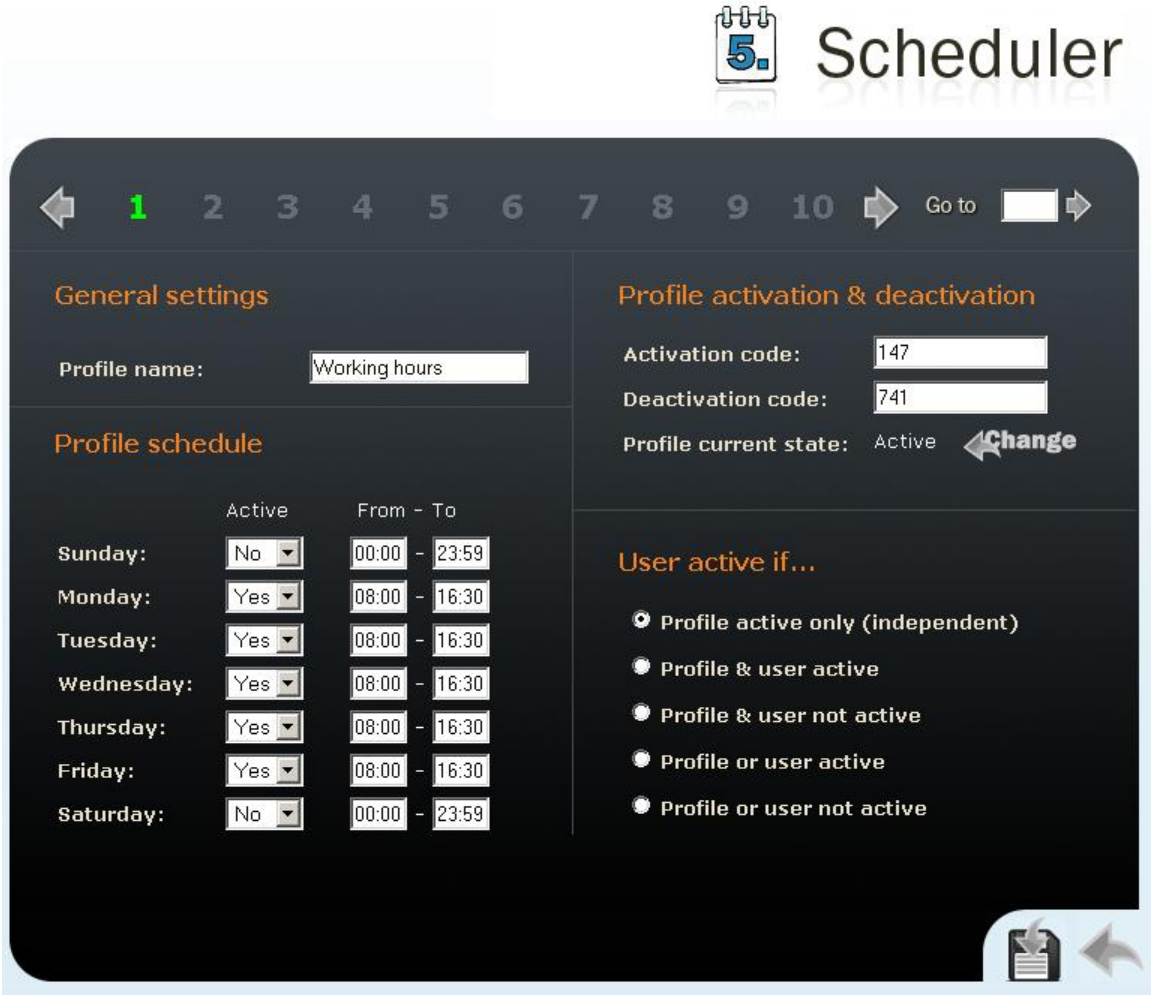


Figure 3.16 Scheduler Set-up

General Settings

Profile name

Enter the scheduler profile name. This parameter is optional and helps you search the list of profiles more easily.

Profile Time Schedule

Set the presence of a user in a week period. A profile is active if the current time matches the set parameters. To use this function properly, make sure that the current time data have been set properly on the device (see the Date and Time subsection).

Profile Activation and Deactivation

Set the manual user activation and deactivation codes. To activate or deactivate a profile, use the DTMF code from the user telephone or the 2N® Helios IP numeric keypad. If just one code is set, or both the codes are the same, the current user status will be switched over after code entering. You can verify the selected status by a sound signalling. If no code is set, the function is inactive and the profile status depends on the time schedule.

User Active if...

Set at what user and profile status the telephone directory numbers will be called. The settings are applicable only if the time schedule is set for the given telephone number in the directory. See the Telephone Directory subsection (for Part Nos. 9137131(CK)E, 9137161(CK)E and 9137111(CK)E this function is supported with a licence key only, Part No. 9137901.)

Profile active only (user independent)

A telephone directory number is called only if the profile is active.
Example of use: you want to call the reception desk during working hours.

Profile & user active

A telephone directory number is called only if the profile and the user are active.
Example of use: you want to call the secretary's office during working hours and the secretary's presence.

Profile active & user inactive

A telephone directory number is called only if the profile is active and the user is inactive.
Example of use: you want to call the reception desk during working hours when the secretary is absent.

Profile or user active

A telephone directory number is called if the profile or the user is active.
Example of use: you want to call the stock release department during working hours or when the personnel are present.

Profile active or user inactive

A telephone directory number is called if the profile is active or the user is inactive.
Example of use: you want to call a technician's cellular phone during lunch time or the technician's absence.

Locks

This menu helps you set the opening codes and modes for locks 1 to 4 attached to 2N® Helios IP (for Part Nos. 9137131(CK)E, 9137161(CK)E and 9137111(CK), locks 3 and 4 are supported only if a licence key is inserted, Part No. 9137901).

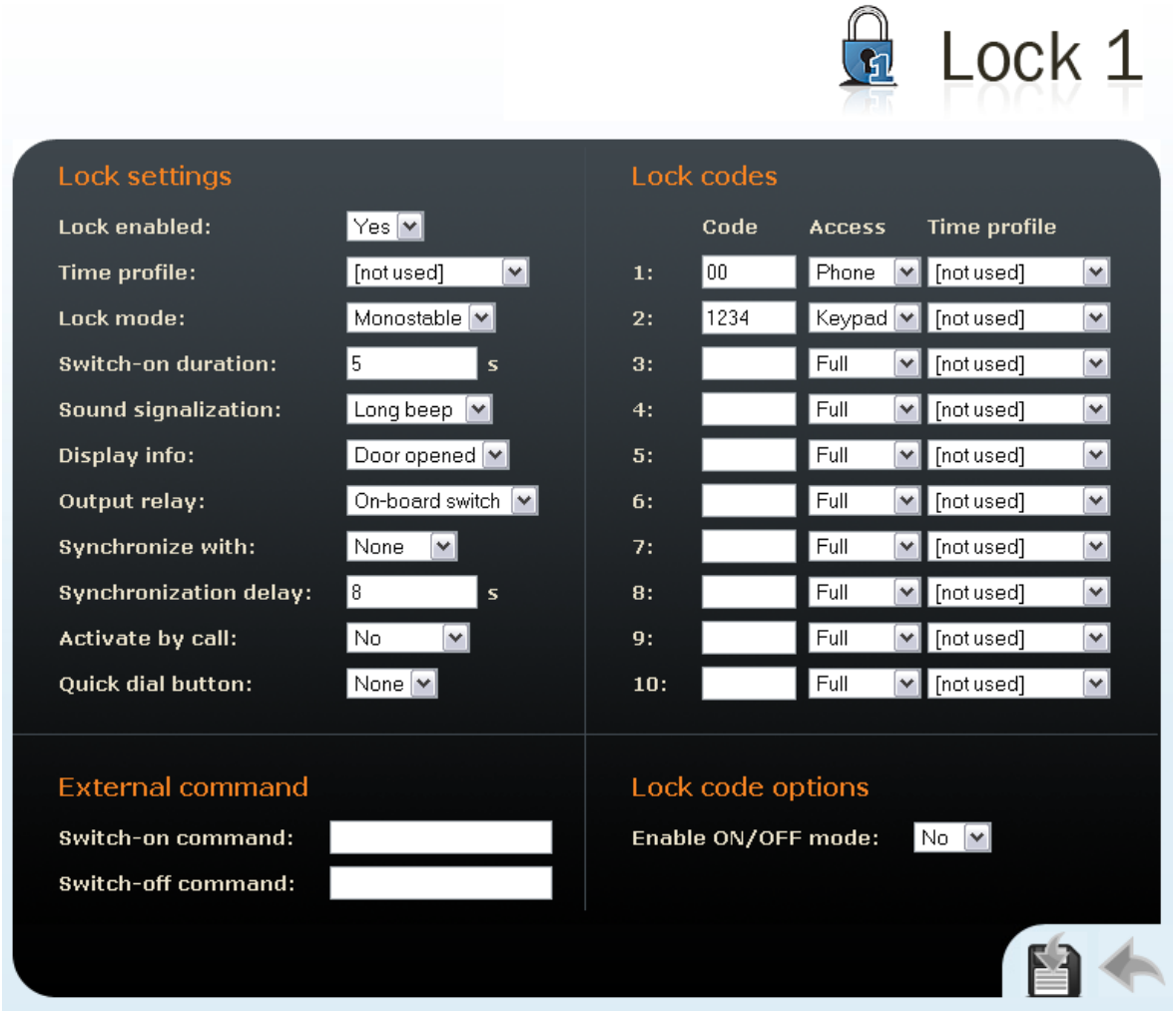


Figure 3.17 Lock Settings

Lock Settings

Lock enabled

Enable or disable lock control globally. If disabled, the lock cannot be opened with any of the codes entered (including the user lock codes) or activated by a call or speed dialling button.

Time profile

Assign a time schedule to the lock code for global management. If the assigned time schedule is not active, the lock switch cannot be opened with a lock code or activated by a call or speed dialling button. Refer to the Scheduler subsection for details on time schedule settings.

Lock mode
Select either the mono-stable and bi-stable lock switch mode. The switch is automatically switched off after a predefined switch-on time in the mono-stable mode. The first activation opens and the second activation closes the switch in the bi-stable mode.

Switch-on duration
Set the lock switch-on time in the mono-stable mode. The time interval set here is not applied to the bi-stable mode.

Sound signalling
Set the sound signalling type during lock switch-on status. Select one of the following: Short tone, Long tone (during the whole switch-on time), or a User sound, refer to Subs. User Sounds.

Display info
Enable or disable displaying of lock switch-on signalling.

Output relay
Assign one of the following switching relays to the lock: Basic switch or Additional switch (Part No. 9137310E).

Synchronise with
Enable lock synchronisation for automatic lock switch activation after a predefined time interval after another lock switch activation. Use the **Synchronisation delay** parameter to set the timeout value.

Synchronisation delay
Set the time interval for synchronised activation of lock switches. The parameter is not applied if the **Synchronise with** function (above) is not enabled.

Activate by call
Set lock activation by an incoming/outgoing call. The switch is active during the whole call in the bi-stable lock switch mode. The switch is activated by the call start and deactivated after a predefined switch-on time in the mono-stable mode.

Quick dial button
Assign one of the speed (quick) dial buttons to the lock switch. Push this speed dial button to activate the lock switch. Once assigned to a lock switch, this button cannot be used for dialling.

External command

Switch-on command
Set the command to be sent to an external device (WEB relay, e.g.) via the HTTP protocol (GET request) whenever the lock switch is activated. The required format is http://ip_address/path. Example: http://192.168.1.50/relay1=on.

Switch-off command
Set the command to be sent to an external device (WEB relay, e.g.) via the HTTP protocol (GET request) whenever the lock switch is deactivated. The required format is http://ip_address/path. Example: http://192.168.1.50/relay1=off.

Lock Codes

A list of the universal lock codes to be entered using a telephone set or the 2N® Helios IP keypad. The count of these global lock codes is 10 (or 2 for Part Nos. 9137131(CK)E, 9137161(CK)E, 9137111(CK)E unless a licence key is used, Part No. 9137901). In addition to these ten codes, each user may be assigned a user-dedicated unlocking code (for Part Nos. 9137131(CK)E, 9137161(CK)E and 9137111(CK)E with a licence key only, Part No. 9137901.)

Access

Disable code entering from the user's numeric keypad or telephone set.

Time profile

Assign a time schedule to the lock code for validity management. Refer to the Scheduler subsection for details on time schedule settings.

Lock code options

Enable ON/OFF mode

You are recommended to enable different activation/deactivation codes while setting the bi-stable lock mode. Use this parameter to set a mode where odd codes (1, 3, 5, …) are used for lock switch activation and even codes (2, 4, 6, …) for lock switch deactivation. If this mode is OFF (default setting), then any code makes the lock switch turn into the opposite state (ON/OFF). This does not apply to the mono-stable lock switch mode where the activation time is prolonged.

Network

This menu is used for setting the 2N® Helios IP network parameters. A change of any of these parameters will not show until the next 2N® Helios IP restart.

By default, obtaining the IP address from the DHCP server is switched on in 2N® Helios IP (DHCP client enabled). To find the IP address of your 2N® Helios IP, use the 2N® Helios IP Network Scanner program included on the CD. If, in your LAN, the DHCP server is not used or properly configured for your 2N® Helios IP, you can push the appropriate quick dialling button sequence to switch 2N® Helios IP into the fixed IP address mode (see the Switching to Default Network Parameters – Dynamic IP Address subsection).

DHCP Settings

DHCP client enabled

Switch on the function of obtaining the IP address from the DHCP server.

Static Settings

For Windows OS users: find the network parameters by entering *ipconfig –all* in the command line.

Static IP address

Set the static IP address assigned by your local network administrator.

Network mask

Set the network mask.

Default gateway

Set the default network gateway.

Primary DNS

Set the IP address of the primary Domain Name Server used in your LAN.

Secondary DNS

Set the IP address of the secondary Domain Name Server used in your LAN.

NAT Settings

These settings are applicable only if 2N® Helios IP is operated in a LAN and assigned no public IP address.

External IP address

Set the public IP address for your router to which 2N® Helios IP is connected. If 2N® Helios IP's IP address is public, leave this field blank.

Figure 3.18 Network Parameter Setting

Date and Time

This menu helps you set the time zone and time synchronisation using the NTP server. For manual data and time setting refer to the Tools subsection.

Time Zone

Time zone

Set the time offset at the place of installation relative to the GMT – Greenwich Mean Time. This setting is intended for switching on/off the daylight saving time in spring and autumn.

TZ rule

If 2N® Helios IP is installed in a location not included in the Time zone parameter, specify the time shift offset and daylight saving time switch on/off manually here. Remember to set the Time zone to the Use TZ rule below function.

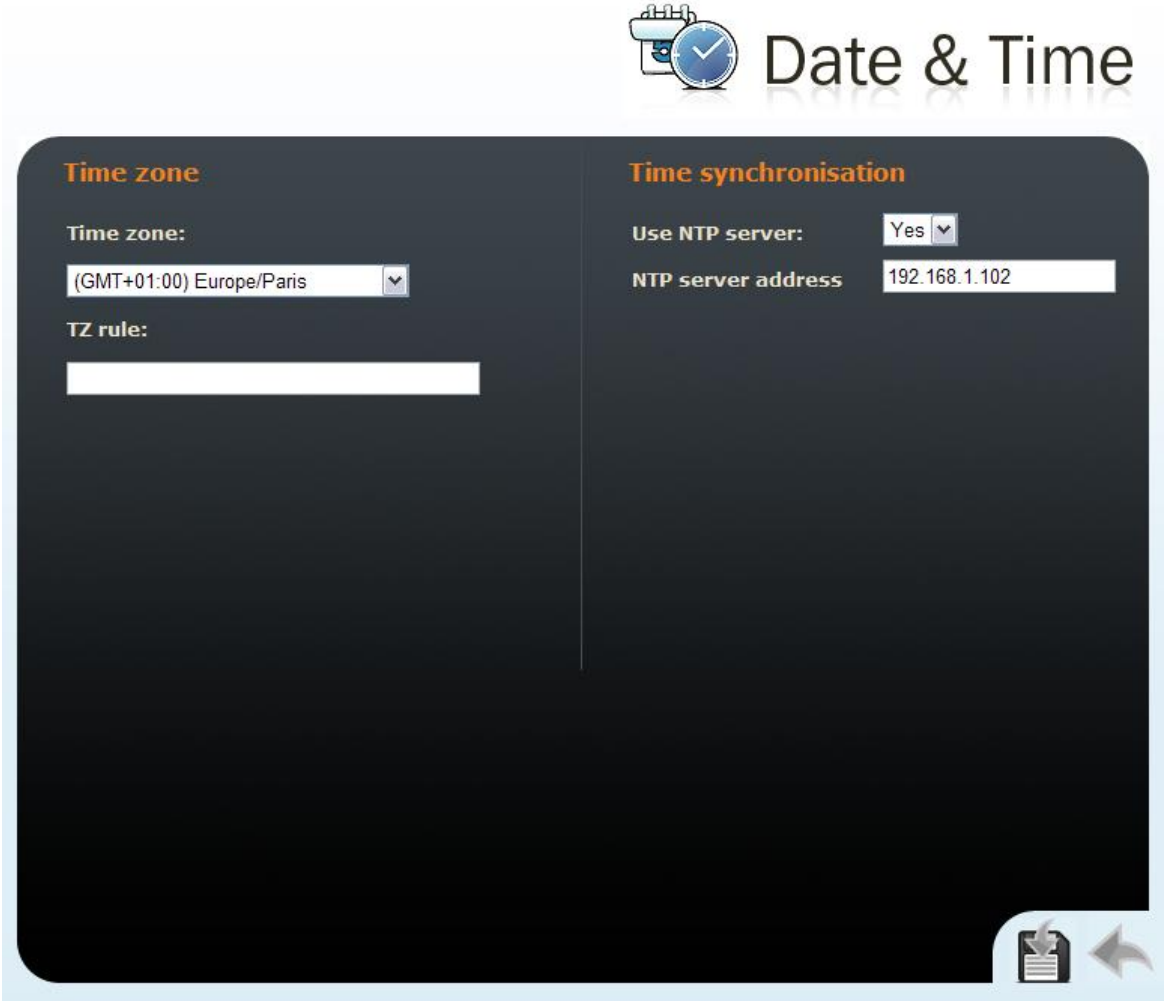


Figure 3.19 Date and Time Settings

Time Synchronisation

Use NTP server

Enable or disable the 2N® Helios IP synchronisation using the NTP (Network Time Protocol) server.

NTP server address

Set the IP address of the NTP server for 2N® Helios IP time synchronisation.

SIP Settings

In order to set up calls from 2N® Helios IP, define your VoIP network parameters. To do this use the *Advanced settings –> SIP settings* menu.

Remember to restart 2N® Helios IP after setting the SIP parameters.

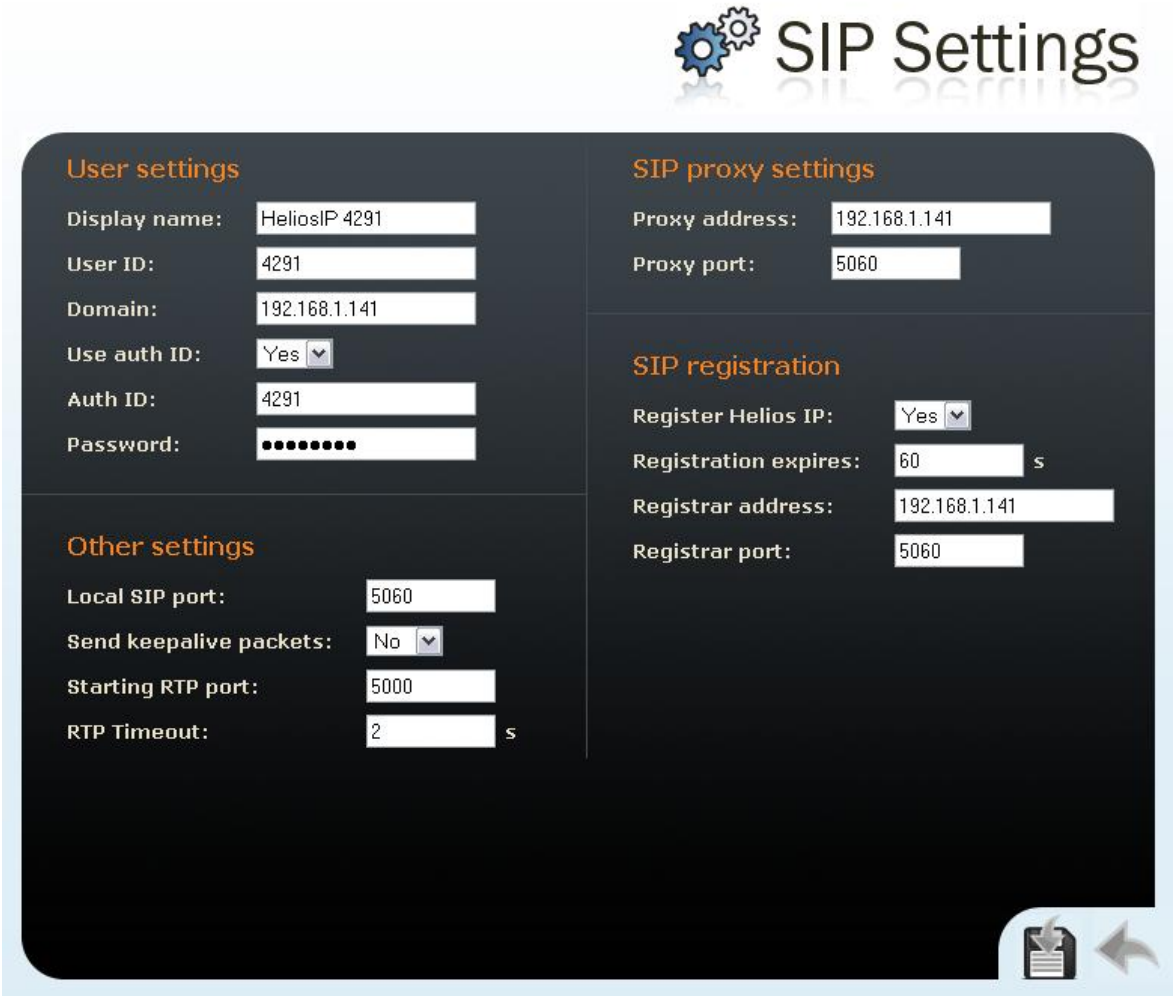


Figure 3.20 SIP Settings

User Settings

Display name

The name to be displayed to the called party. The name will also be displayed in the right-hand upper corner of the web interface and used for 2N® Helios IP identification in the 2N® Helios IP Network Scanner application.

User ID

Set the user ID for registration.

Domain

Enter the domain name or IP address of the server to be used for calling.

Use authorisation ID

Set whether 2N® Helios IP should use the authorisation ID or user ID only for authorisation.

Auth ID

Enter the authorisation ID to be used for authorisation if the Use authorisation ID parameter is set to Yes.

Password
Enter the password to be used for authorisation during registration and calling.

Other Settings

Local SIP port
Set the communication port to be used for SIP signalling by 2N® Helios IP. The change of this parameter will not show until the next 2N® Helios IP restart. The default value is 5060.

Send KeepAlive packets
Set whether or not 2N® Helios IP should periodically query about the state of the called station using the SIP OPTIONS requests during a call. Use this option to detect a disconnected or defective station.

Initial RTP port
Set the initial port for the range of 60 RTP ports to be used for audio and video transfers. The default value is 5000 (i.e. the range of 5060-5059).

RTP Timeout
Set the time limit for receiving audio stream RTP packets during a call. When the limit is exceeded, the call is terminated by 2N® Helios IP. Set 0 to disable this limitation.

SIP Proxy Settings

Proxy address
Set the IP address of the SIP proxy used by 2N® Helios IP for calling.

Proxy port
Set the SIP signalling port to the SIP proxy.

SIP Proxy Registration

Register 2N® Helios IP
Set whether 2N® Helios IP should register with the SIP proxy.

Registration expires
Set the minimum time for 2N® Helios IP registration attempts.

Registrar address
Set the registrar IP address.

Registrar port
Set the registrar communication port.

Administration Web Server

This menu helps you configure the administration web server.

Web Server Settings

Web server

You can disable the administration web server launching. The change of this parameter will not show until the next 2N® Helios IP restart. To enable the web server, follow the instructions mentioned in the Web Server subsection.

Web server port

Set the web server communication port. The change of this parameter will not show until the next 2N® Helios IP restart

Web server language

Set the default language after login to the web server.

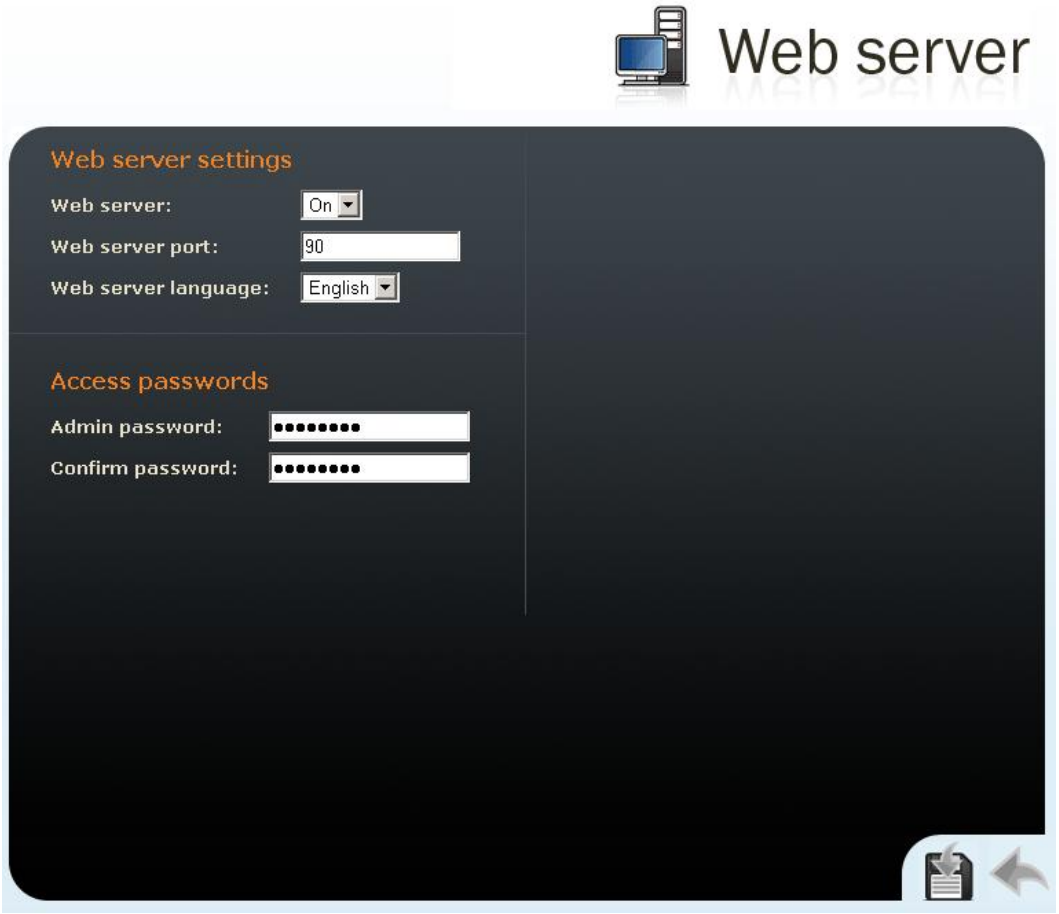


Figure 3.21 Web Server Configuration

Access Passwords

Admin password

Set the administrator password for 2N® Helios IP configuration through the administration web server. Enter the new password into both of the Admin password and Confirm password fields.

Audio

This menu is used to set the 2N® Helios IP audio parameters.

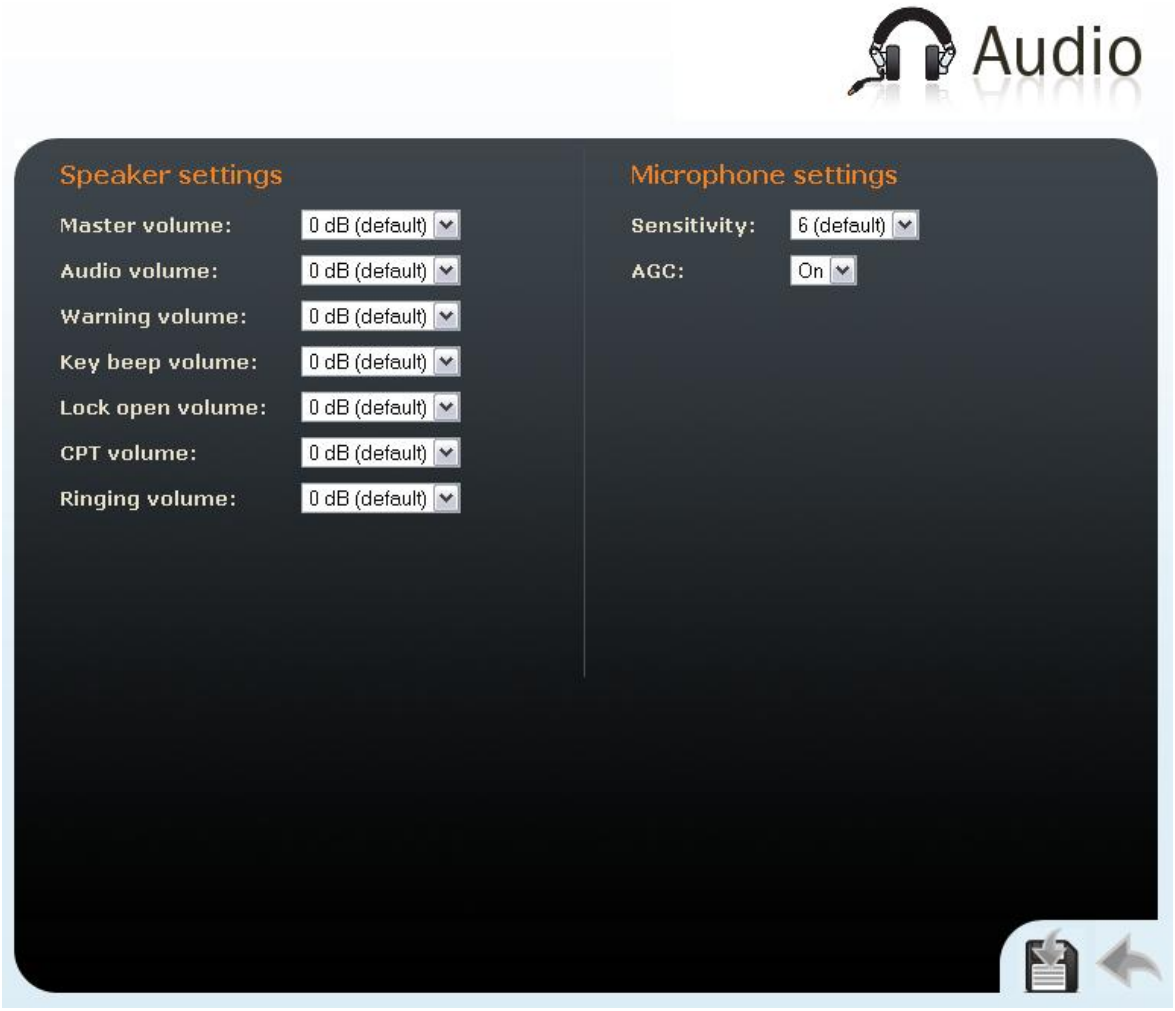


Figure 3.22 Audio Parameter Settings

Speaker Settings

Master volume

Set the global loudspeaker volume. This parameter controls the volume of the calls and all acoustic signalling.

Audio volume

Adjust the loudspeaker volume for a call.

Warning volume
Set the volume of the 2N® Helios IP signal tones that announce status changes.

Key beep volume
Set the volume of the tone generated whenever a key is pushed.

Lock open volume
Set the volume of the unlocking signalling tone.

Call tones
Set the volume of the dialling, ringing and busy tones if generated by 2N® Helios IP.

Ringing
Set the volume of the incoming call signalling tone – ringing tone. Incoming calls are signalled when the automatic incoming call receiving function is off, see the Miscellaneous subsection.

Microphone Settings

Sensitivity
Set the microphone sensitivity.

AGC (Automatic Gain Control)
Set whether the Automatic Gain Control function should be used.

Noise reduction
Set the mode for noise reduction arising primarily during echo cancellation.

Video

This menu is used to set the video camera. To set the codec properties use the *Advanced Settings –> Video codecs* menu, see the Video Codecs subsection.

Brightness
Set the intensity of the video camera stream.

Colour saturation
Set the colour saturation of the video camera stream.

Flip horizontally
Set whether the picture is to be flipped horizontally.

Frame rate decreasing
Enable an automatic decreasing of the frame rate under poor light conditions, which improves the video quality to the detriment of the frame rate.

Flicker avoidance
Here you can eliminate flicker caused by artificial sources of light such as fluorescent lamps. The flicker frequency depends on the light source power supply frequency.

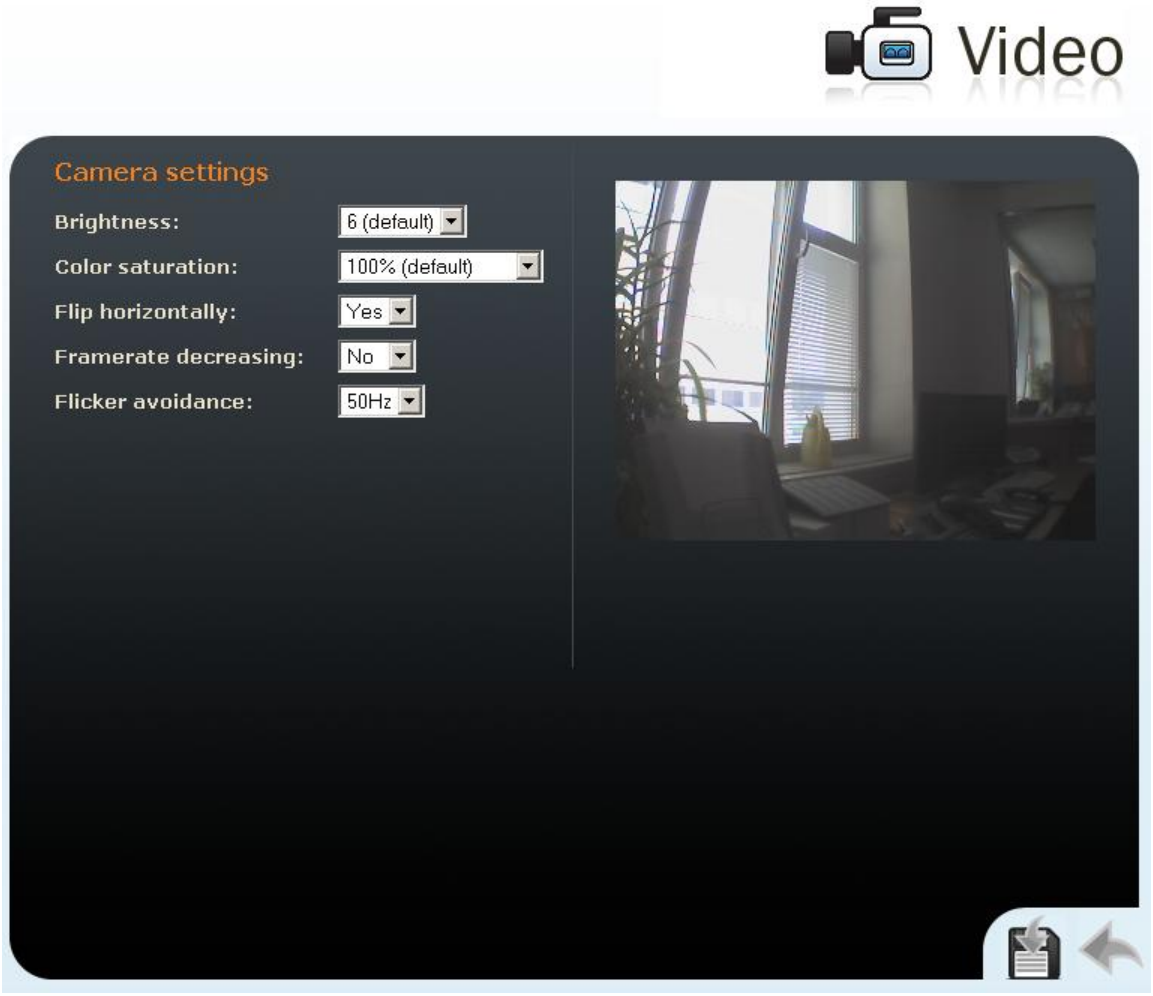


Figure 3.23 Video Parameter Settings

Audio Codecs

This tag is used for configuration of priorities of the use of audio codecs.

Preferred Audio Codecs

Set the audio codecs for 2N® Helios IP telephone call set-ups. Select G.711 (PCMA or PCMU), L16, or G.729. Audio codec priorities are determined by the sequence: the first codec in the sequence has the highest priority. Codec G.729 is available with a licence key only, Part No. 9137902.

Transmission Quality Settings

Jitter compensation

Set the buffer length to compensate jitter caused by variable delays between incoming RTP packets. A longer buffer mans a better transmission quality yet a higher transmission delay.

QoS DSCP for audio

Set the priority of the audio transmitting packets in the network. The value is copied into the ToS (Type of Service) field in the IP packet header.

Caution

- Wrong settings may deteriorate the transfer quality. Do not change this parameter if you are not sure. The change in transfer quality will show only in case the network components support this service.

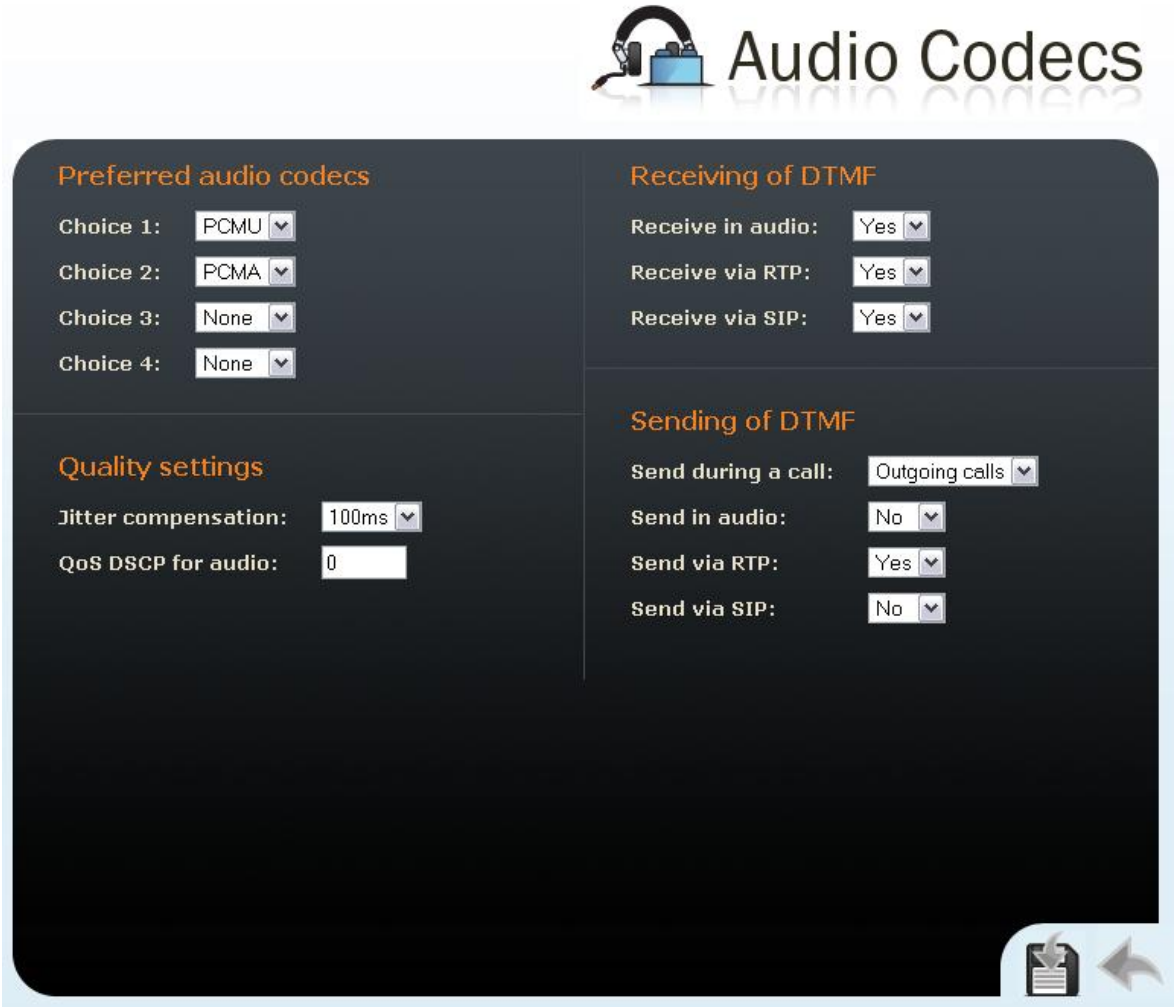


Figure 3.24 Audio Codec Settings

DTMF receiving and Sending

Defines how DTMF signalling should be received and sent. Check the opponent's parameters for correct settings.

1. Receive as audio / Send as tones – transmits the DTMF signals in the audio channel. This setting is unsuitable for cases where the audio channel is comprised using high-compression codecs such as GSM codecs.
2. Receive as RTP / Send as RTP – transmits DTMF signalling as special RTP packets according to the RFC2833 recommendation.
3. Receive as SIP INFO / Send as SIP INFO – transmits DTMF signalling using the SIP INFO packets as recommended in RFC2976.

   To send DTMF signalling during a call use the 0 to 9, * and # keys. You can also disable this function, enable for outgoing calls only, or enable for incoming and outgoing calls by setting the Send during call parameter.

Video Codecs

2N® Helios IP uses video codec H.264 or H.263. You can set their parameters in such a manner that the video transmitted conforms to the needs of the opponent.

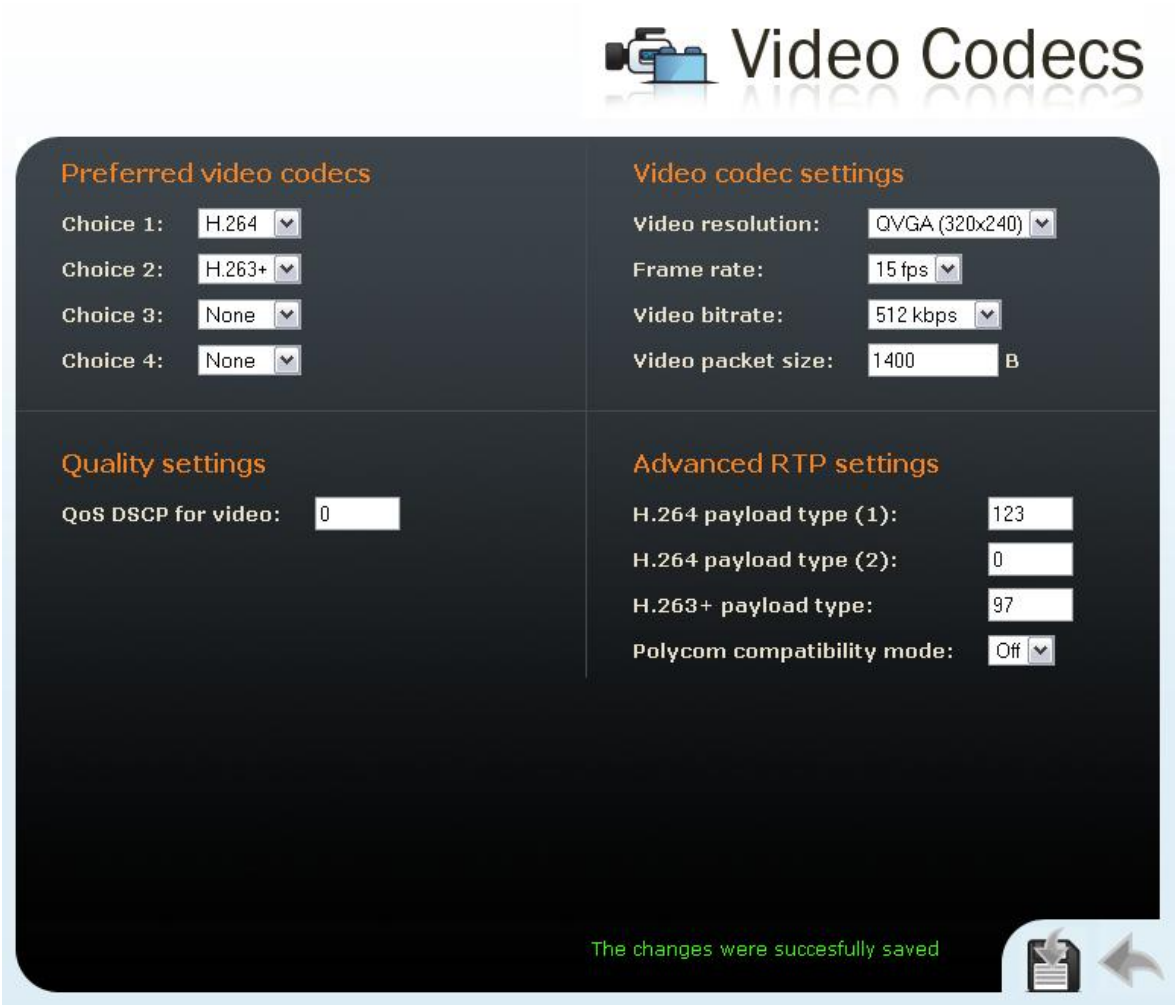


Figure 3.25 Video Codec Settings

Preferred Video Codecs

Set the priority of video codecs for call set-ups.

Video Codec Settings

Video resolution

Set the picture formats of the video transmitted. The resolution values range from QCIF (176x144) to VGA (640×480).

Frame rate

Set the frame rate for frames to be sent by 2N® Helios IP to the VoIP network.

Video bit rate

Set the transmission rate for video transmission from 2N® Helios IP. The lower the bit rate the greater picture compression is necessary. This results in a lower picture quality on the receiving end. A high bit rate does not have to mean significant improvement of transmission as a whole because the network may get overloaded, resulting in a greater packet loss rate or delay.

Video packet size

Set how large the video transmitting packet should be.

Quality Settings

QoS DSCP for video

Set the priority of the video transmitting packets in the network. The value is copied into the ToS (Type of Service) field in the IP packet header.

Caution

- Wrong settings may deteriorate the transfer quality. Do not change this parameter if you are not sure. The change in the transfer quality will show only in case the network components support this service.

Advanced RTP Settings

RTP payload type

Set the Media Format value of the Media attribute (a) in the SPD part of the INVITE message. Some SIP proxies require this value for a successful video call set-up. If 0 is selected, the given RTP payload type is not used. It is necessary to disable one RTP payload type in some SIP proxies, e.g. the Cisco Call Manager.

Caution

- Wrong settings may result in a loss of network compatibility. Do not change this parameter if you are not sure. Losing network compatibility may cause video transmission errors.

Polycom phone compatibility

Set compatibility of SDP messages with some Polycom and Cisco phones. With this mode on, 2N® Helios IP does not include the sendonly flag in the codec specification for video streams.

Streaming

This function is available to 2N® Helios IP Part Nos. 9137131(CK)E, 9137161(CK)E and 9137111(CK)E with a valid licence key only, Part No. 9137901.

This menu allows the user to enable audio and video streaming into your LAN without affecting the other functions of 2N® Helios IP. This function may be used for security purposes. An RTSP supporting receiver is required for acceptance of audio and video streaming. For this purpose, it is possible to download the VLC Media player software free of charge. For the VLC media player configuration see below.

RTSP Server

RTP server

Enable and disable audio and video streaming.

Allow IP address

Specify the allowed IP address of the stream-receiving user. If the value is not entered, you can require the stream from any IP address.

Caution

- 2N® Helios IP enables to send a single stream at a time. When a stream request comes from another IP address, the current stream is discontinued and the stream is distributed to the IP address that sent the request.

Enable audio stream

Set whether the audio channel is part of the stream transmitted.

Enable video stream

Set whether the video channel is part of the stream transmitted.

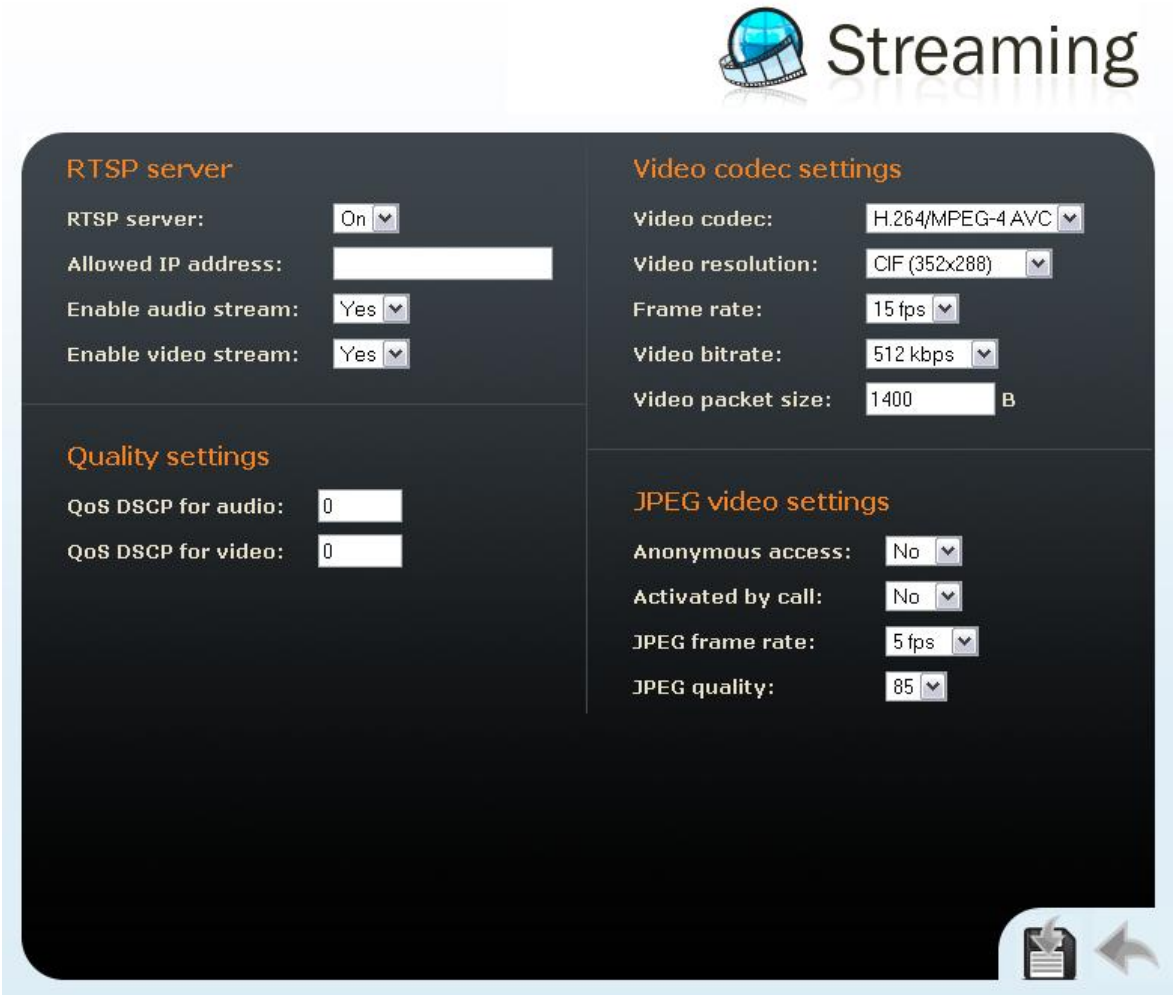


Figure 3.26 Video Streaming Setting

Quality Settings

QoS DSCP for video

Set the priority of the video transmitting packages in the network. The value is a decimal number and defines individual bits in the ToS (Type of Service) field in the IP packet header (bits 8–16).

Caution

- Wrong settings may deteriorate the transfer quality. Do not change this parameter if you are not sure. The change in transfer quality will show only in case the network components support this service.

Video Codec Settings

Video codec

Set one of the following codec modes for video streaming: H.264/MPEG4-AVC or MPEG4 Part2.

Video resolution

Set the individual picture formats for the video transmitted. The resolution values range from QCIF (176x144) to VGA (640×480).

Frame rate

Set the frame rate for frames to be transmitted.

Video bit rate

Set the bit rate for video transmission. The parameter affects the compression ratio and thus the video transmission quality.

Video packet size

Set the size limits for the video transmitting RTP packet.

VLC Set-Up for Streaming Video from 2N® Helios IP

1. Install the VLC Media player application (version 0.9.4 in this manual).
2. After installation and start, the window will be displayed as shown in the figure below.

Figure 3.27 VLC Media Player Main Window

3. In the main menu select the source for playing the video, *Media->Open Network.*

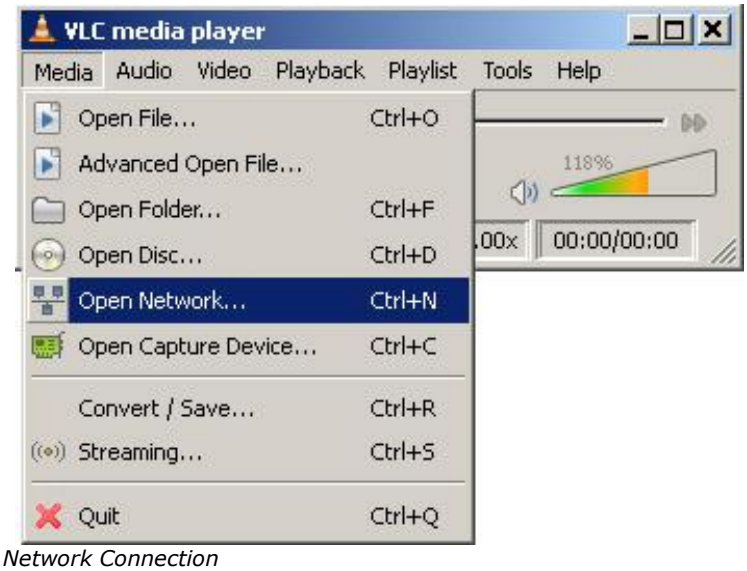


Figure 3.28 Open Network Connection

4. In the network card select the RTSP protocol and insert the IP address of the 2N® Helios IP device that is sending the video streaming (192.168.3.175 in this case).

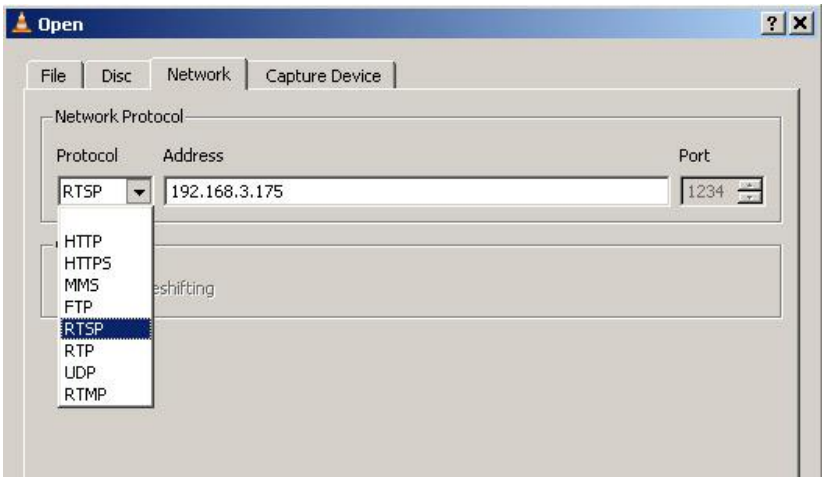


Figure 3.29 RTSP Stream IP Address Setting

5. After the confirmation button OK is pushed, the video player window will appear.

Figure 3.30 Streaming Video Receiving

6. Push the STOP button to stop receiving the video signal.
7. Open a window of the playlist, *Playlist –> Show playlist.*

Figure 3.31 Show Playlist

8. The playlist window will display the list of played records, in this case the RTSP stream from 2N® Helios IP (IP address 192.168.3.175).

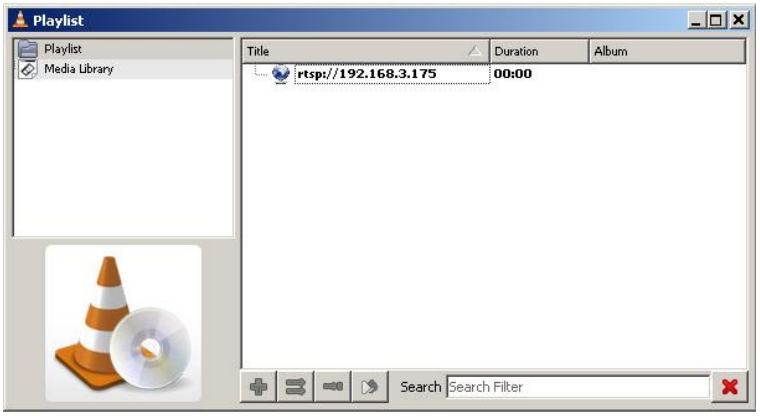


Figure 3.32 Playlist Window

9. Save the playlist using the *Playlist –> Save playlist to file...* menu.

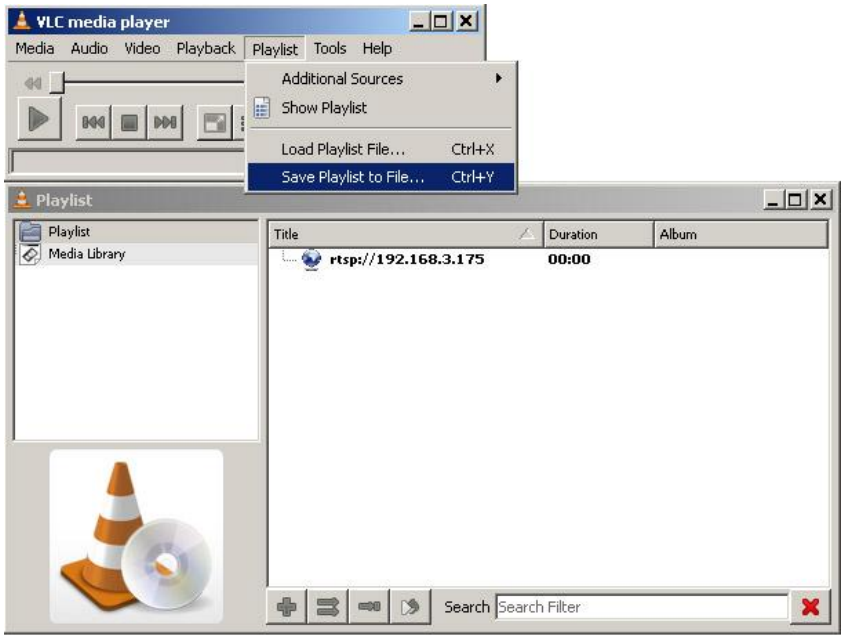


Figure 3.33 Save Playlist

10. From now on, whenever opened, the playlist will immediately display video streaming from the selected 2N® Helios IP device.

Figure 3.34 Streaming Video Receiving

JPEG Video Setting

Anonymous access

You can download a JPEG video from any IP address without authentication. Otherwise, the video is only accessible after login or during a call if the Call activation is enabled.

Call activation

Set whether the JPEG video is available to the terminal upon the call beginning. The function must be supported by the terminal (Snom 820/870, e.g.).

Frame rate

Set the transmission rate to be offered to the end terminal.

JPEG quality

Set the JPEG image quality. The recommended value is 85. The parameter affects the image size and quality.

JPEG Video Use

- The JPEG video can be used for any application that is capable of downloading JPEG images from 2N® Helios IP web interface.
- To load an image from a camera enter any of the links below in your web browser:

  http://helios_ip_address/enu/camera160x120.jpg

  http://helios_ip_address/enu/camera320x240.jpg

  http://helios_ip_address/enu/camera352x272.jpg

http://helios_ip_address/enu/camera352x288.jpg

http://helios_ip_address/enu/camera640x480.jpg

Be sure to enable the Anonymous access to the JPEG video (see above) for this function.

- You can assign displaying JPEG images to a Snom 820/870 terminal button. To do this, set the Action URL function and enter one of the commands below as the parameter:

  Chyba! Odkaz není platný. or

  http://helios_ip_address/enu/snom870-video.xml.

Auto Update

2N® Helios IP allows both for manual and automatic updates of configuration and firmware. The automatic update is done through a TFTP server. For Part Nos. 9137131(CK)E, 9137161(CK)E and 9137111(CK)E this function is supported only if a licence key is inserted, Part No. 9137901.

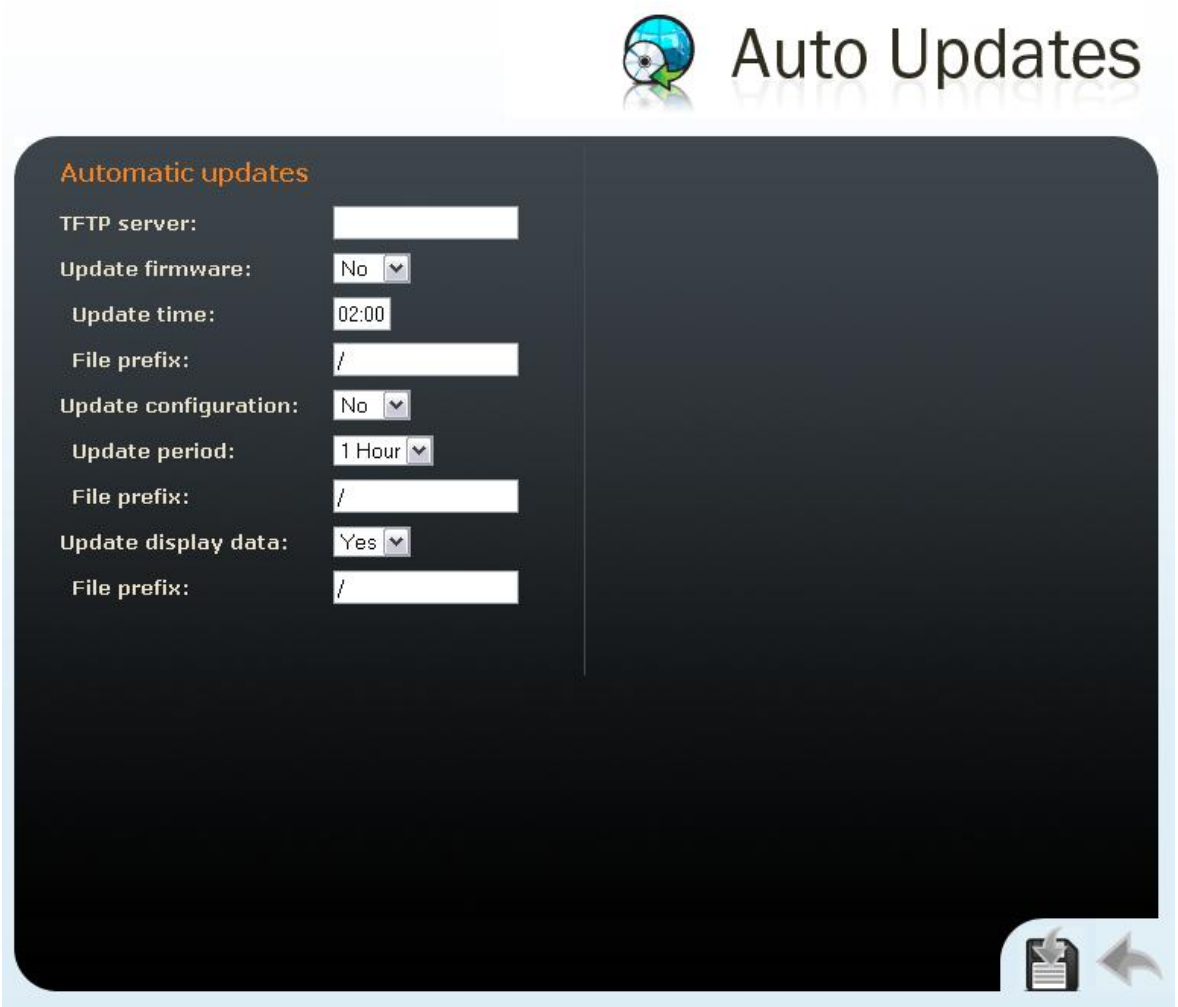


Figure 3.35 Firmware Update

Automatic Update

TFTP server address

The IP address of the TFTP server where the firmware and configuration are located that are to be automatically uploaded to 2N® Helios IP.

Update firmware

Enable/disable automatic firmware downloading from the TFTP server.

Update time

Set a period for automatic firmware downloading attempts from the TFTP server. 2N® Helios IP periodically (at a predefined time once a day) checks the TFTP server for a later firmware version. Having found one, 2N® Helios IP updates the firmware and restarts automatically. With this parameter you can choose the most convenient time of a day for updating (when 2N® Helios IP is not very busy).

File prefix

Specify the TFTP firmware directory path or file prefix. 2N® Helios IP expects the firmware file to be named Xiphelios_app.bin, where X is the prefix specified in this parameter.

Update configuration

Enable or disable automatic configuration downloading from the TFTP server.

Update period

Set the time interval after which 2N® Helios IP gets connected to the TFTP server for configuration file downloading.

File prefix

Specify the TFTP configuration directory path or file prefix. 2N® Helios IP expects the configuration file to be named Xiphelios_config.ini, where X is the prefix specified in this parameter.

Update display data

Enable/disable automatic display data/program updating from the TFTP server. The display data are updated in the same time intervals together with the configuration file.

File prefix

Specify the TFTP display data directory path or file prefix. 2N® Helios IP expects the configuration file to be named Xiphelios_disp.bin, where X is the prefix specified in this parameter.

Display

The 9137160KDE and 9137160CKDE 2N® Helios IP models are equipped with a colour TFT display, which shows variable information such as digital name tags, telephone directories, 2N® Helios IP statuses and/or user-defined images. You can set the basic display parameters in this menu. For the display data uploading to 2N® Helios IP refer to the Display Program.

Figure 3.36 Display

Display Settings

Display enable

Enable or disable the display use.

Maximum idle timeout (ads)

Set the maximum display idle time (i.e. when the user does not control the device using the buttons or numeric keypad), after which the advertisement or user-defined image displaying mode is switched on automatically.

Maximum idle timeout (name tags)

Set the maximum display idle time (i.e. when the user does not control the device using the buttons or numeric keypad), after which the structured telephone directory mode is switched into the name tag displaying mode.

Search mode

Set the mode of searching users in the telephone directory displayed. Either use the initial name characters (prefixes) or every occurrence of the set characters in the name (any occurrence).

System Log

This menu is used for configuration of system and log message sending. This service is useful for solving 2N® Helios IP errors if any and contacting the 2N TELEKOMUNIKACE a.s. Technical Support. Normally, it is not necessary to configure this menu. To receive syslog messages, a syslog server has to be installed in your PC.

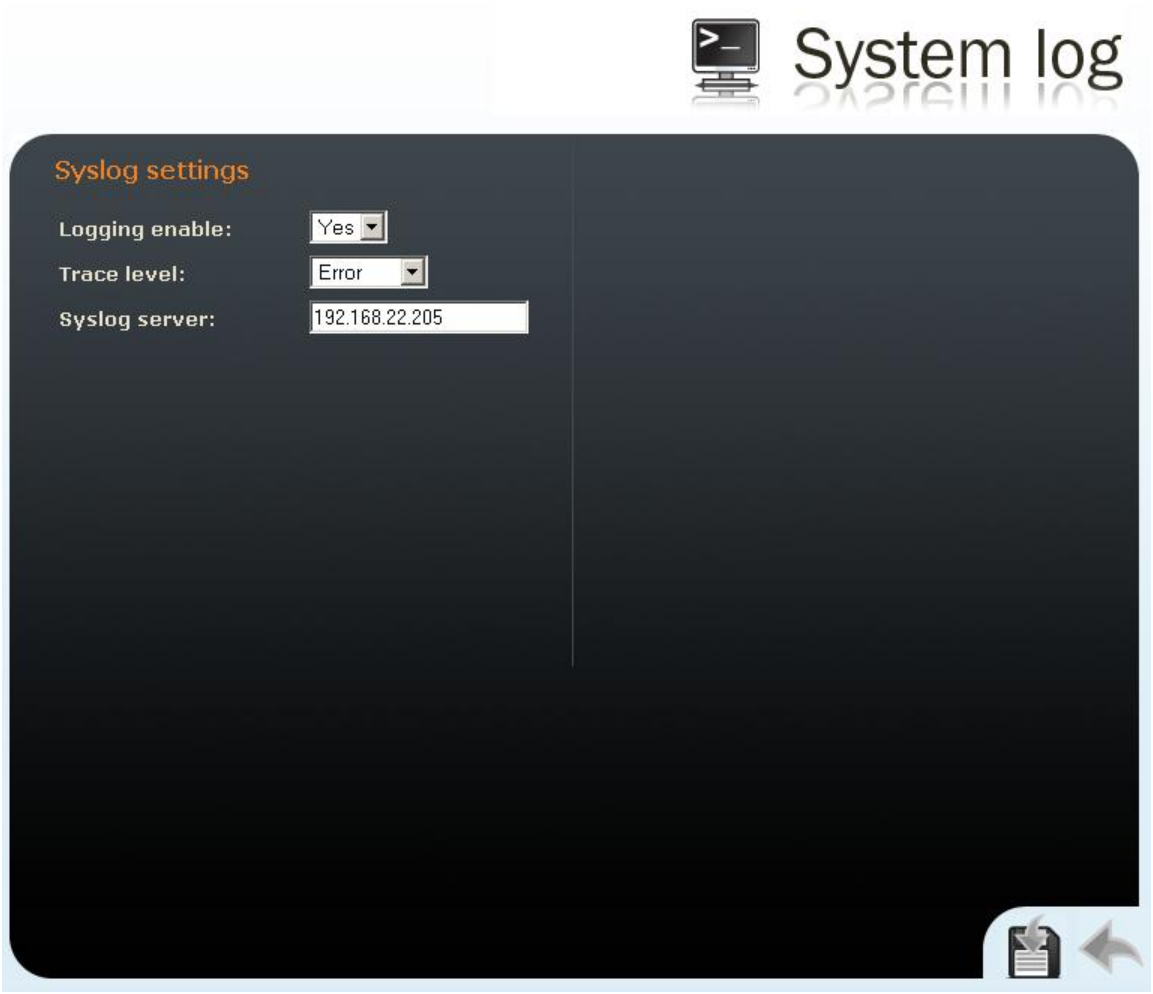


Figure 3.37 System Log

Logging enable

Enable or disable sending of system and log reports and storing them on the syslog server.

Trace level

Set the level of detail of the reports.

Syslog server

The IP address of the server on which the system log application is running.

Miscellaneous

Here set the additional parameters of 2N® Helios IP that were not included in the above-described menus.

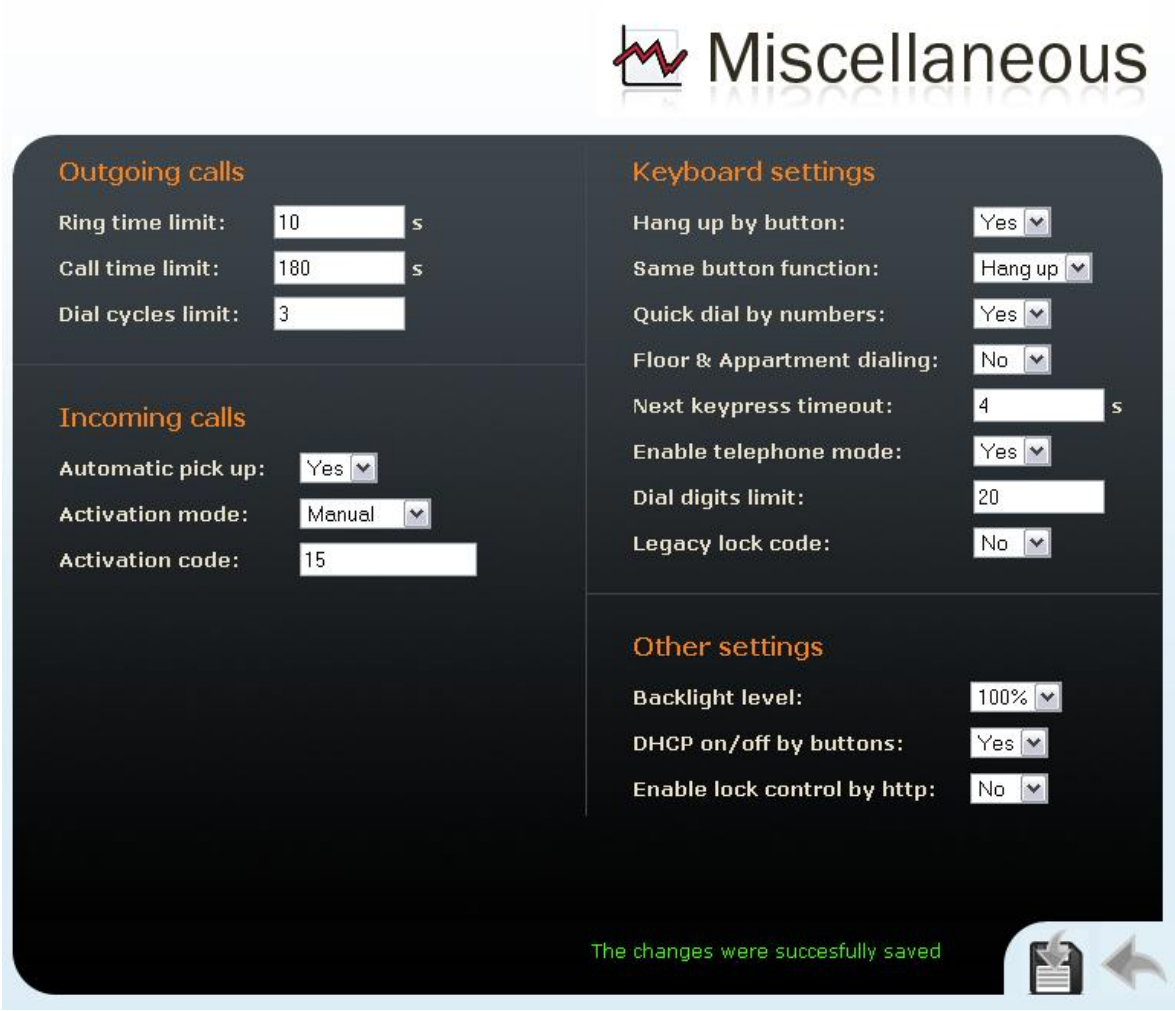


Figure 3.38 Miscellaneous Settings

Outgoing Calls

Ring time limit

Set the call set-up and ringing time limits for outgoing calls. If the calls are routed through the GSM gateways of Part Nos. 505004, 505214 or 505612 to the GSM network, it is advisable to set a time value longer than 20 s.

Call time limit

Set the maximum call duration. When the call end is approaching, 2N® Helios IP starts generating tones signalling the end of the call. The call will automatically be terminated 10s after this signal. To prolong the call, send a DTMF code (push #, e.g.) on your phone.

Dial cycles limit

Set the maximum count of telephone directory searching attempts. The function is useful whenever the substitute is defined and in the case of deadlock.

Incoming Calls

Automatic answer

Defines how 2N® Helios IP should behave when a call is coming. If the Automatic answer is disabled, 2N® Helios IP signals an incoming calls by ringing and the external subscriber can answer or reject the call by pushing * or # respectively. If the Automatic answer is enabled, 2N® Helios IP receives the call automatically and processes as selected in the Activation mode and Activation code parameters.

Activation mode

If the Automatic answer is enabled, incoming calls are received automatically by 2N® Helios IP. 2N® Helios IP enables you to receive up to 3 incoming calls at the same time. You can control 2N® Helios IP through incoming calls using tone dialling from your telephone keypad (activate or deactivate users or profiles, e.g.). A single incoming call may only be connected with the 2N® Helios IP microphone, loudspeaker and camera. Use the Activation mode parameter to define whether the incoming call should be connected automatically, or the activation code should be required for connection (see below).

Activation code

Set the activation code necessary for interconnecting the incoming call audio and video if the Automatic answer is enabled and the Activation code is set to Manual.

Beep on connect

Use this parameter to enable/disable 2N® Helios IP connection signalling by a beep during an incoming call.

Keyboard Settings

Hang up by # button

Enable call termination with the # key.

Same button function

Assign a function to the call-establishing quick dialling button when re-pushed.

None *– re-pushing the quick dialling button does not affect the set up or active call.*

Hang-up *– re-pushing the quick dialling button ends the set-up or active call.*

Dial next *– re-pushing the quick dialling button allows you to skip an attempt to set up a call and proceed to the next telephone number in the directory for another set-up.*

Flash *– re-pushing the quick dialling button sends the FLASH signal into the active call.*

Quick dialling using digits

Enable user calling from the telephone directory by dialling the user number (two or three digits) and confirmation with *.

Floor & Apartment dialling

Enable special calling to numbers included in the telephone directory by entering a floor number on the numerical keypad and pushing a quick dialling button. Buttons 1 – 6 represent apartments on the floor (A through F). The following

floors and apartments are assigned to telephone directory positions: 01A – 1, 01B – 2, 01C – 3, 01D – 4, 01E – 5, 01F – 6, 02A – 7, 02B – 8 etc. until 99F – 594.

Keystroke timeout

Set the delay between two digits when entering a code or telephone number using the 2N® Helios IP keypad.

Enable telephone mode

Enable to set up calls directly to the telephone numbers entered from the 2N® Helios IP numeric keypad using the *telephone_number* key sequence.

Dial digits limit

Define the maximum number of digits of a telephone number in the Telephone mode. When the defined count is reached, the telephone number is dialled automatically without the need to push * subsequently.

Legacy lock code

Set whether the first code in the lock 1 and lock 2 list may be entered from a VoIP phone valid without an * confirmation.

Other Settings

Backlight level

Set the level of the keypad backlight.

DHCP on/off by buttons

Set whether a quick dialling button combination may switch to obtaining the IP address from the DHCP server upon the 2N® Helios IP restart as described in the Switching to Default Network Parameters – Dynamic IP Address subsection.

Enable lock control by HTTP

Enable lock control by HTTP requests sent by 2N® Helios IP. Select ON, OFF or change over upon the following HTTP (GET) request: http://helios_ip_address/enu/lockstate.xml.p?lockXstate=Y, where X is the lock number (1-4) and Y is 0 for switch off, 1 for switch on and 2 for change over.

Tools

This menu helps you set the 2N® Helios IP date and time manually and reboot the device.

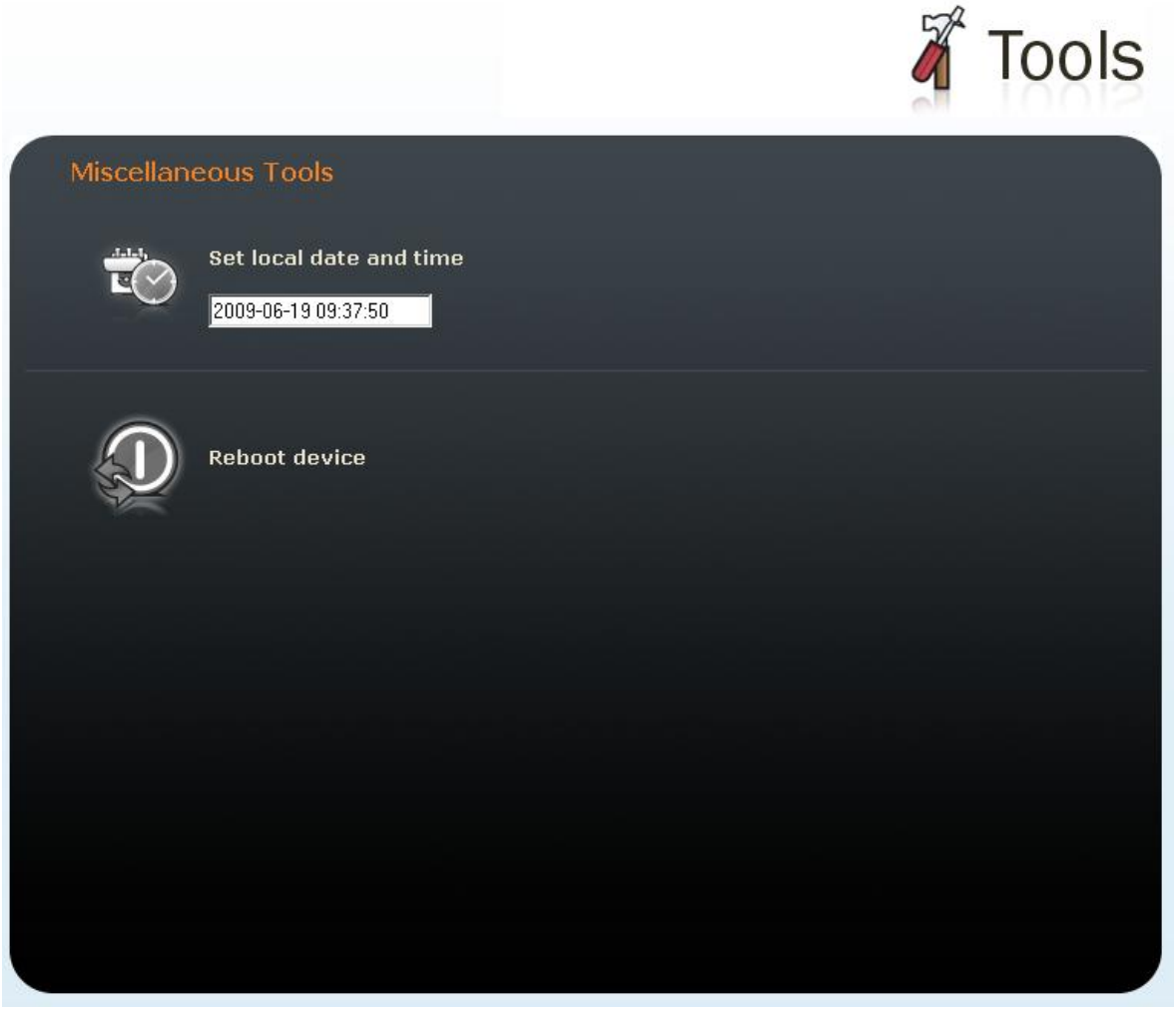


Figure 3.39 Tools

Local Date and Time Setting

Used for date and time setting in case the NTP synchronisation is disabled (see the Date and Time subsection). Push the button to synchronise the 2N® Helios IP time with your PC time.

Reboot device

Used for device restarting in case of changes of some configuration parameters, namely network settings, administration web interface settings and some SIP configuration parameters.

Configuration

This menu is used for configuration downloading, uploading and resetting.

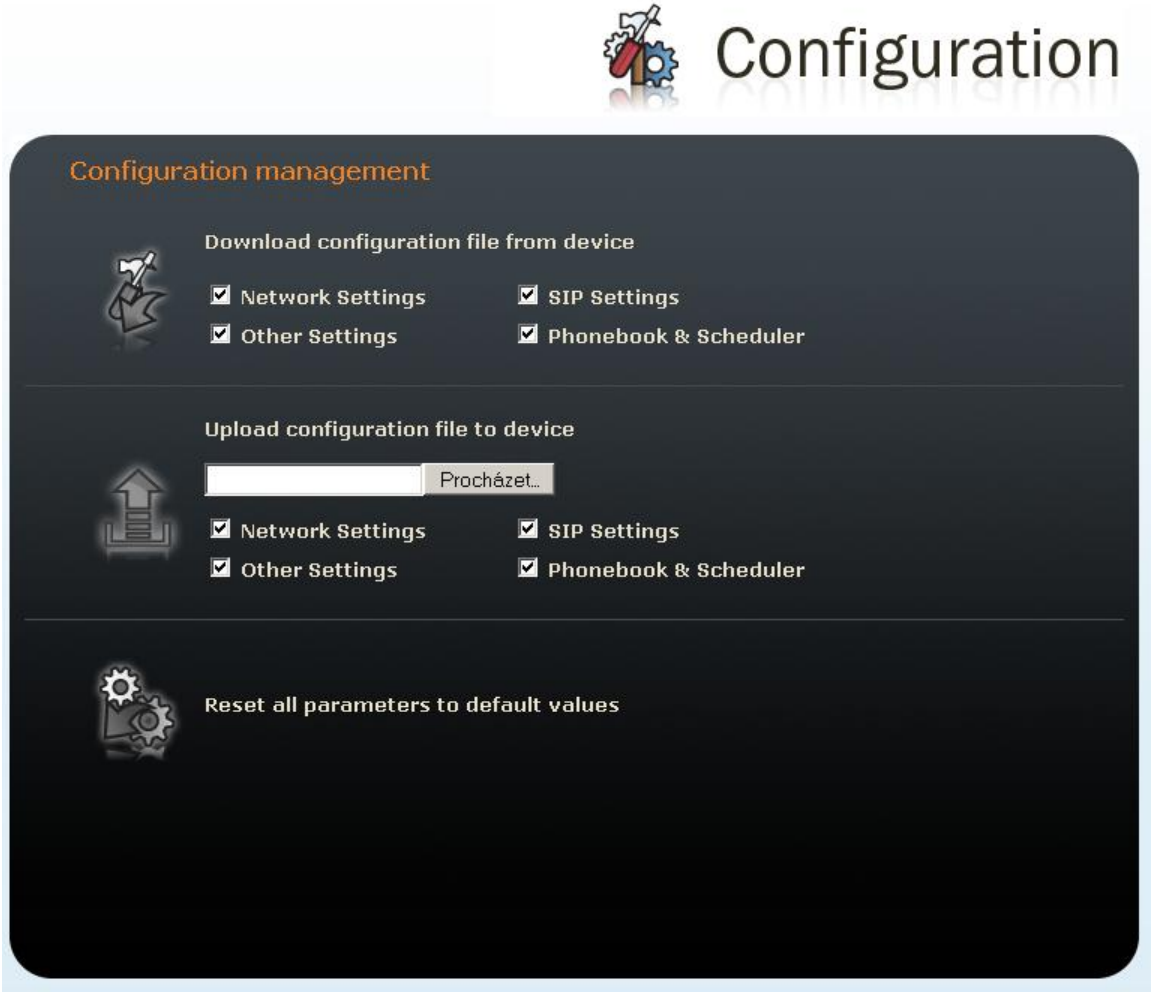


Figure 3.40 Configuration Setting

Download configuration from device

Used for downloading configuration from 2N® Helios IP. To save the configuration, push . Use the checkboxes to select the configuration parts to be downloaded.

Upload configuration to device

Used for uploading configuration to 2N® Helios IP. Use the Browse button to select the configuration file and push to upload it to 2N® Helios IP. Use the checkboxes to select the configuration parts to be uploaded. For copying the configuration file from another 2N® Helios IP device, disable the network and SIP setting downloading to avoid network collision and use of one and the same SIP configuration. For automatic configuration update refer to the Auto Update subsection.

Resetting of all parameters

Resets all 2N® Helios IP parameters to default values.

Caution

- This selection does not apply to the network settings to avoid network collision and disabling the option to configure using the administration web server. To reset the network settings to default values use the procedure described in the Switching to Default Network Parameters – Static IP Address and Switching to Default Network Parameters – Dynamic IP Address subsections.

Display Program

This menu is used for display program uploading. The display program is prepared using the configuration tool available on the attached CD. For display settings refer to the Display subsection.

Display Program Uploading

Used for uploading the display program to 2N® Helios IP. Use the Browse button to select the configuration file and push to upload it to 2N® Helios IP. If no file is selected, the current display program is removed from the memory when this button is pressed.

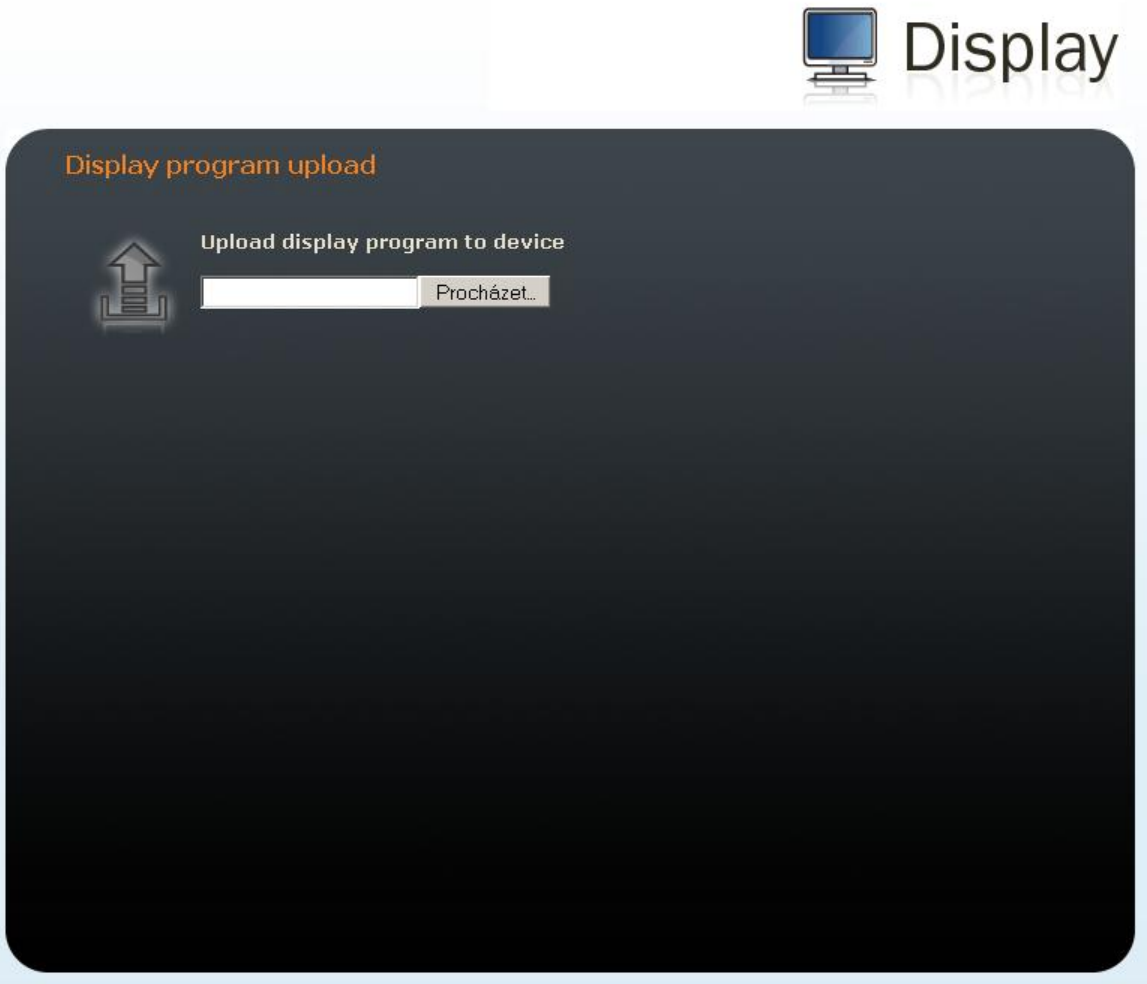


Figure 3.41 Display Program Uploading

Firmware

This menu is used for manual firmware updating.

Manual Firmware Update

Used for manual firmware updating using the configuration web interface. Use the Browse button to select the new firmware file and push to upload it to 2N® Helios IP. For automatic update refer to the Auto Update subsection.

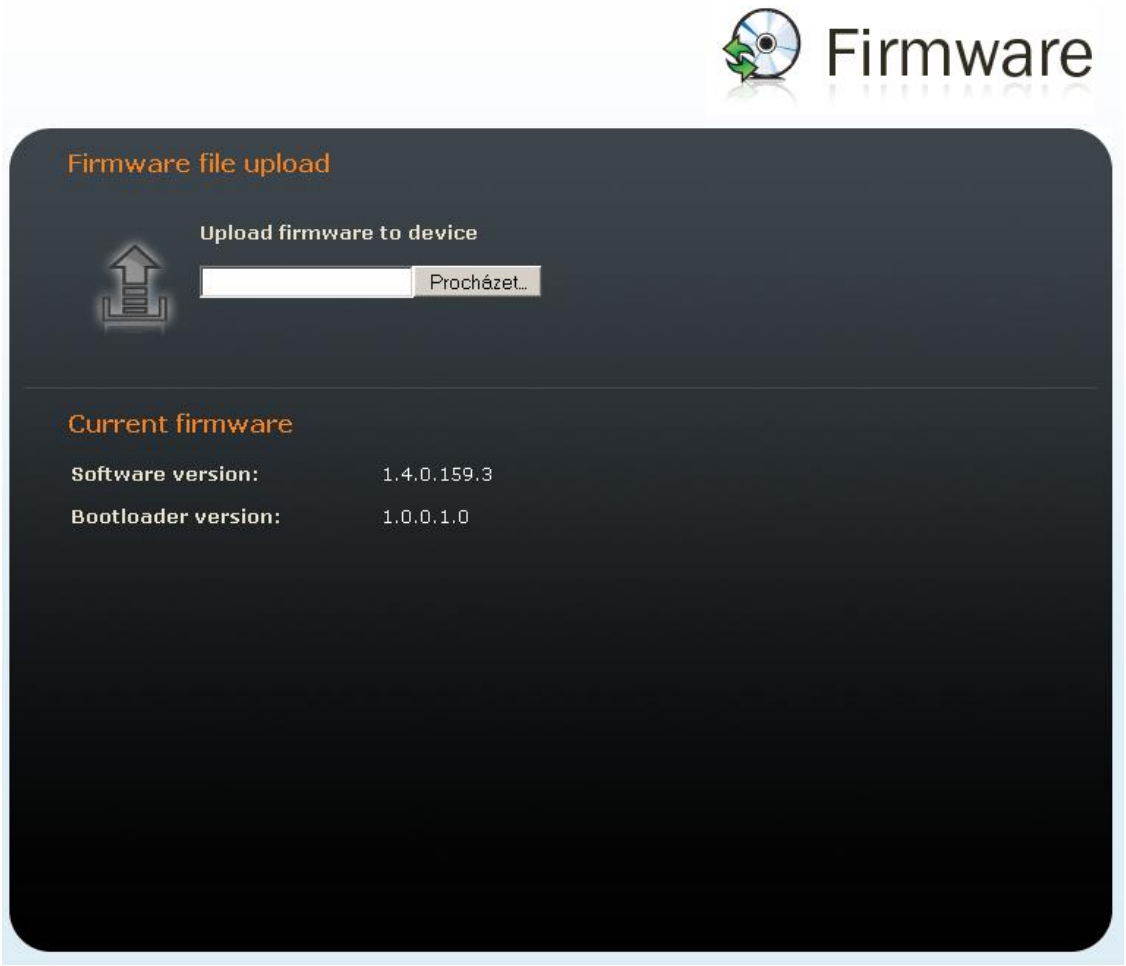


Figure 3.42 Firmware

User Sounds

This menu helps create customised signalling of 2N® Helios IP states by replacing the default tone signalling with user sound files.

User Sound Upload

Used for handling user sound files within 2N® Helios IP. Push the Browse button to select a sound file and then push to upload the file into 2N® Helios IP. The user sound format is an 8bit or 16bit .WAV file with 8kHz sampling frequency. Push to remove the file uploaded. Push to play and verify the recorded sound on your PC.

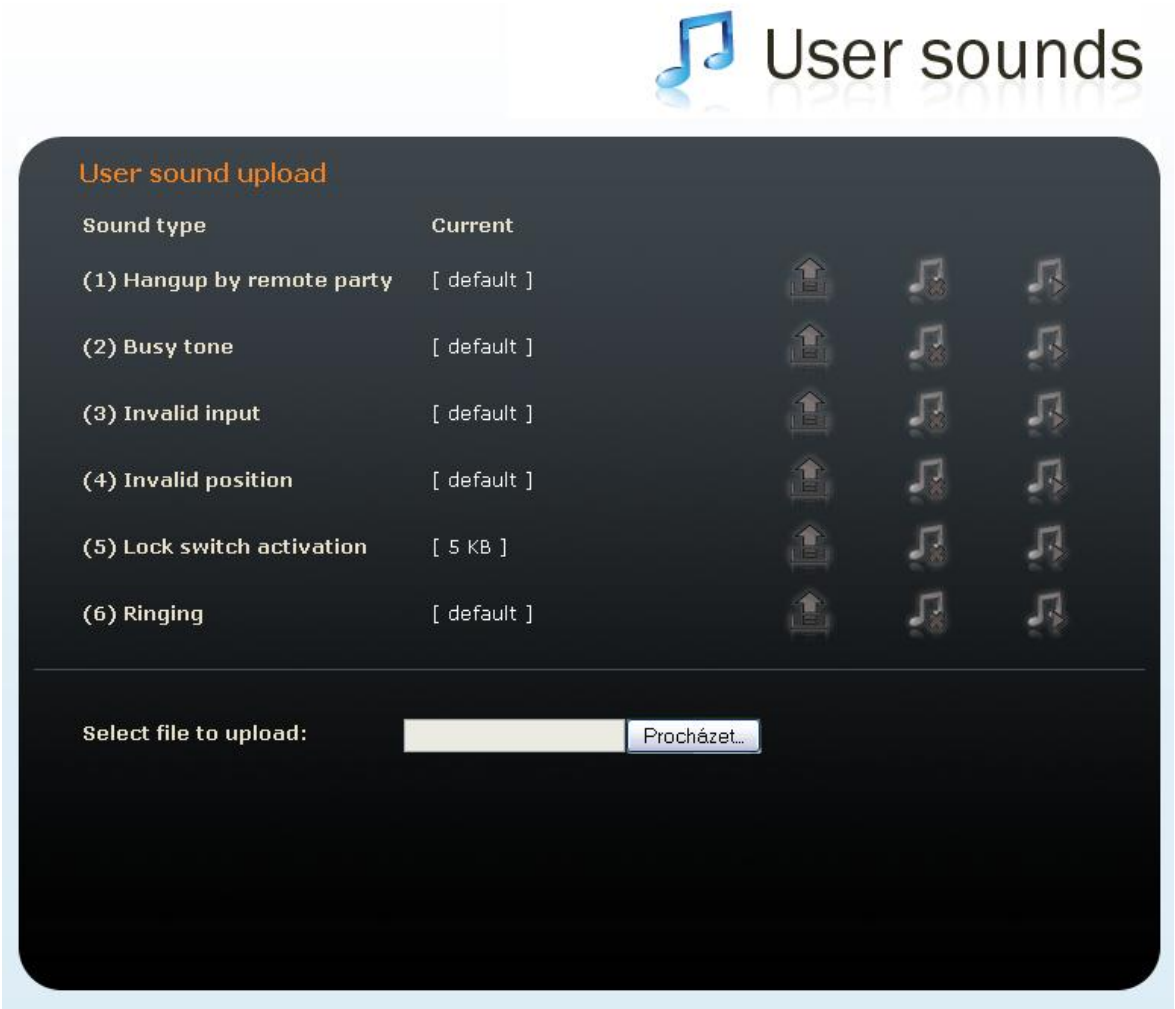


Figure 3.43 User sounds

The following user sounds can be used:

Hang-up by remote party *– here replace the disconnect tone signalling that the called station has hung up.*

Busy tone *– replace the standard busy tone.*

Invalid input *– replace the invalid lock switch password sound.*

Invalid position *– replace the speed dial button sound signalling a non-programmed telephone directory position.*

Lock switch activation *– replace the lock switch activation sound.*

Ringing *– replace the standard incoming ringing tone when the Automatic call answering function is off, refer to the Miscellaneous subsection.*

Network Trace

This menu helps capture incoming and outgoing packets on the 2N® Helios IP network interface. The file with the captured data can be downloaded and analysed, using, e.g., Wireshark (www.wireshark.org). Push the Start button to launch capturing and the Stop button to terminate capturing.

The captured packets are stored in the ring buffer of the size of 4MB. Whenever the buffer is filled up, the oldest packets are deleted automatically. You are recommended to reduce the video stream transmission speed for packet capturing below 512kbps.

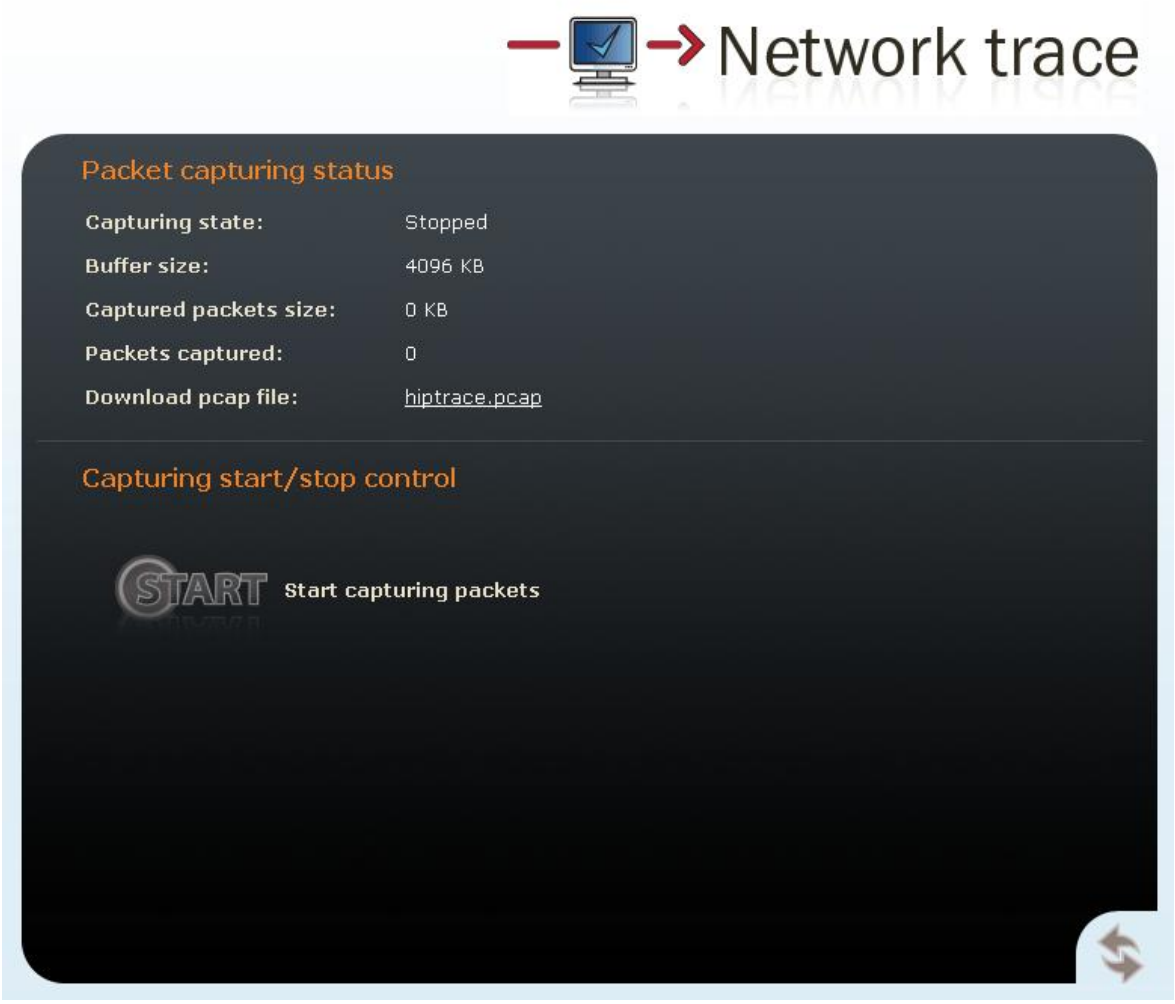


Figure 3.44 Network trace

Licence

This menu is used for entering licence keys, Part Nos. 9137901 and 9137902. Licence keys upgrade the 2N® Helios IP functionality (see the Software Facilities of 2N® Helios IP Basic Units subsection). Contact your local distributor for the licence key to your 2N® Helios IP.

Licence

Licence type

Displays the type of licence currently saved in 2N® Helios IP. The available features of your licence are displayed in the *Available features* subsection.

Licence expiry

2N® Helios IP models of Part Nos. 9137131(CK), 9137161(CK) and 9137111(CK) are distributed with the Professional trial licence limited to 800 hours. Every restart subtracts 1 hour from this value.

Licence key

Enter the licence key received from your distributor in this field.

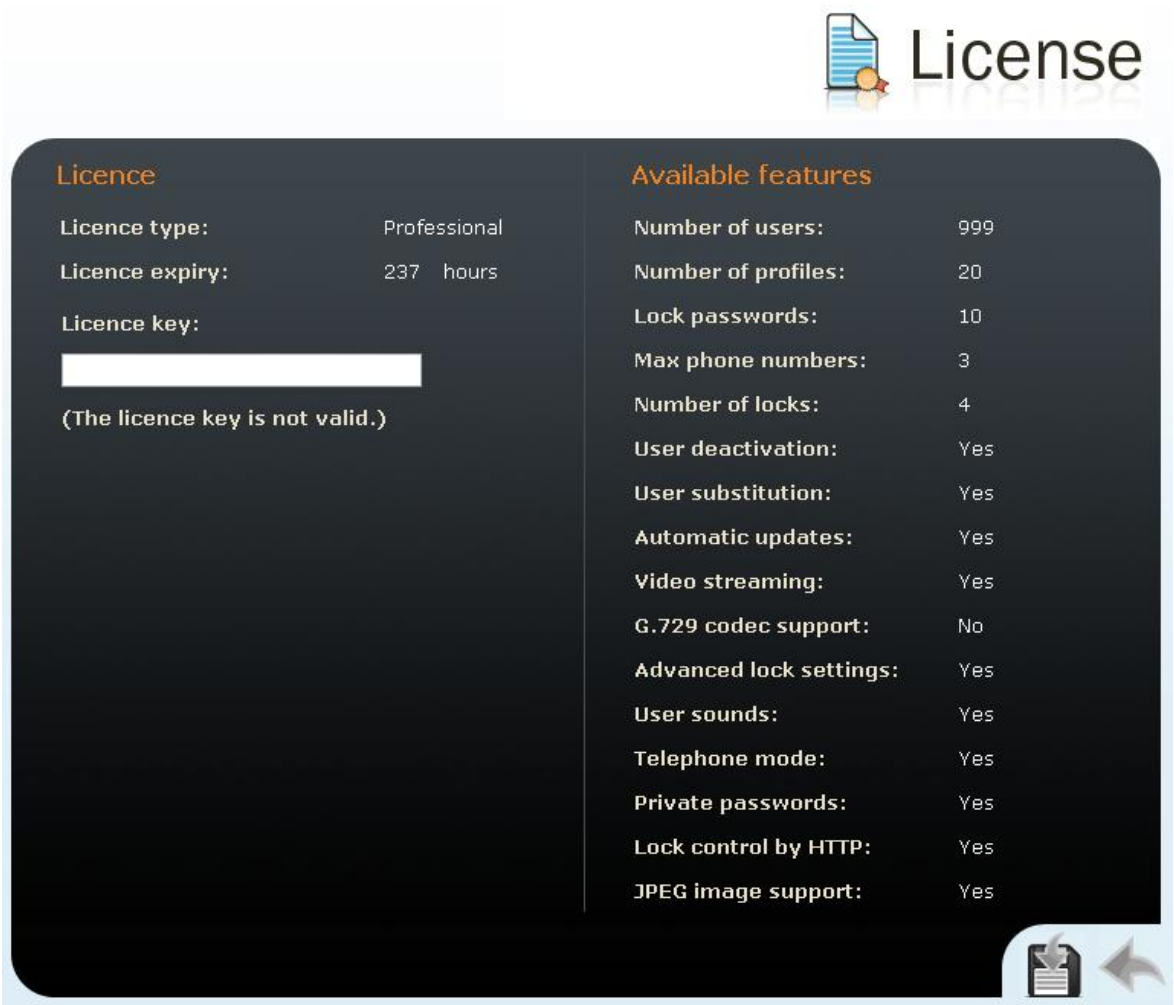


Figure 3.45 Licence

Available Features

Provides details on the 2N® Helios IP features following from the applicable licence.

4 Function and Use

This section describes the basic and extending functions of the product.

Here is what you can find in the section:

- 2N® Helios IP control as Viewed by External User
- 2N® Helios IP control as Viewed by Internal User
- Maintenance

4.1 2N® Helios IP Control as Viewed by External User

This section described the 2N® Helios IP control as viewed by an external user (guest).

Quick Dialling Buttons

By pushing a quick dialling button on the basic unit you can call to positions 1,2...6 of the telephone directory (depending on the model type). With extending modules you can use up to 54 quick dialling options.

By pushing a quick dialling button you call the telephone number assigned to the selected telephone directory position. A call set-up is signalled by a long discontinuous tone or any other tone as defined in the attached PBX configuration.

By re-pushing the same button during calling or setting up you can hang up, hang up and call to another telephone number, or activate nothing as defined in the **Miscellaneous** subsection.

You can also hang up the call any time by pushing **#** if the **Hang-up by #** button is enabled; refer to **Miscellaneous**.

Calling to Telephone Directory Position

The 2N® Helios IP telephone directory may contain up to 999 pre-programmed positions. You can use the quick dialling buttons for positions 1 to 54 only. To retrieve the remaining positions, use the numeric keypad if **Quick dialling using digits** is enabled; refer to the **Miscellaneous** subsection.

Procedure: Enter the position number using the numeric keypad (e.g. 05, 15, 200 – two digits at least and three digits at most) and push ***** for confirmation.

You can also hang up the call any time by pushing **#** if the **Hang-up by #** button is enabled; refer to **Miscellaneous**.

Calling to User-Defined Telephone Number

If the **Telephone function enable** (refer to **Miscellaneous**) is selected, you can call the user-defined telephone number using the 2N® Helios IP numeric keypad.

Procedure: Push *****. You can hear the continuous tone from the loudspeaker. Enter the telephone number using the numeric keypad and push ***** again for confirmation.

You can also hang up the call any time by pushing **#** if the **Hang-up by #** button is enabled; refer to **Miscellaneous**.

Incoming Call Answer and Reject

If the automatic incoming call answer is disabled (refer to **Miscellaneous**), a call coming to 2N® Helios IP is signalled with loud ringing. Push ***** to answer and **#** to reject the call.

Code Door Opening (Switch Activation)

2N® Helios IP is equipped with a door unlocking switch. To activate the switch enter the valid code (see **Miscellaneous**) on the numeric keypad.

Procedure: Enter the lock 1 or lock 2 activating code using the numeric keypad and push *.

A valid code is signalled by a continuous switch activation (lock opening) signalling tone. An invalid code is announced by acoustic signalling -·-·-.

User Activation and Deactivation

You can activate or deactivate a user and define call routing to the user telephone numbers using the numeric keypad. For more details refer to the Telephone Directory subsection.

Procedure: Enter the user activation or deactivation code using the numeric keypad and push ***** for confirmation.

A valid code is announced by acoustic signalling -· or ·- depending on the code type. An invalid code is announced by acoustic signalling -·-·-.

Profile Activation and Deactivation

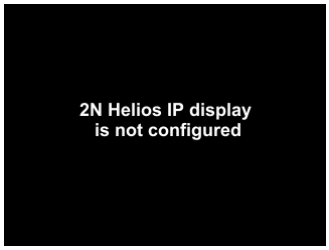
You can activate or deactivate a profile and define call routing to the telephone numbers assigned to the profile using the numeric keypad. For more details refer to the **Scheduler** subsection.

Procedure: Enter the profile activation or deactivation code using the numeric keypad and push ***** for confirmation.

A valid code is announced by acoustic signalling -· or ·- depending on the code type. An invalid code is announced by acoustic signalling -·-·-.

4.2 Display-Equipped 2N® Helios IP Control as Viewed by External User

Until the display program is uploaded to 2N® Helios IP, the display shows the following text: **2N® Helios IP display is not configured**; refer to the figure below. In this state, 2N® Helios IP behaves and is controlled like no-display models, see Display-Equipped 2N® Helios IP Control as Viewed by External User.



With the proper display configuration, the advertisement or electronic name tag mode is displayed upon the 2N® Helios IP power on as pre-programmed.

The display-equipped 2N® Helios IP model is controlled using the numeric keypad and quick dialling buttons. Buttons 2, 4, 6 and 8 are cursor keys in the telephone directory mode. Buttons 3 and 6 are functional keys and initiate the action displayed in the right-hand and left-hand screen corners.

Advertisement Mode

One or more images defined in the display program are displayed in the advertisement mode. To quit the ad mode and move to the electronic name tag mode, push any quick dialling button or numeric keypad key.

Electronic Name Tags

1, 2 or 4 name tags emulating the paper name tags can be displayed in the electronic name tag mode. Push one of the 1, 2, 4 and 5 quick dialling buttons to call the user assigned.

You can also enter the door lock opening codes and activate or deactivate a user or profile in this mode. For steps refer to the no-display 2N® Helios IP subsection. Push the quick dialling button 6 to move to the Telephone directory mode and the * button to move to the **Calling to number** mode (only if the telephone function is enabled, see **Miscellaneous**).

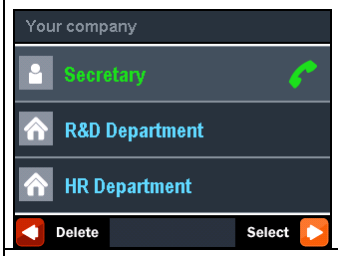
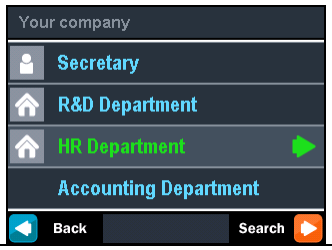
Calling to Number

If the **Telephone function enable** is selected (see **Miscellaneous**), 2N® Helios IP can be used for calling to selected telephone numbers in a standard way. Push ***** in the **Electronic name tag** mode to move to this mode.

Push the quick dialling button 3 or the **#** button to return to the electronic name tag mode. To dial and display the number to be called, use the numeric keypad and push ***** for confirmation. Push the quick dialling button 6 to delete and re-enter the last-dialled number if necessary.

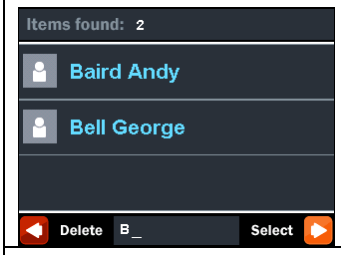
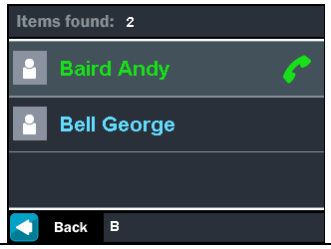
Telephone Directory

A structured telephone directory as defined by the display program is displayed in the telephone directory mode. To browse through the telephone directory use the numeric keypad arrow keys (i.e. keys 2, 4, 6 and 8). Use the up and down arrows to move between the items. Push the right arrow to establish a call or move to a subgroup. The ***** key and quick dialling buttons 4 and 5 have the same function as the right arrow. Use the left arrow to return to the superior group.

	
3-line telephone directory	4-line telephone directory

You can also use the telephone directory for retrieving contacts. Push the quick dialling button 6 to switch on the phone directory searching mode.

To retrieve a text, use the numeric keypad. The text to be searched is displayed in the centre of the status line. To delete the last character push the quick dialling button 3.

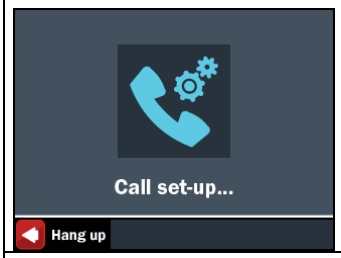
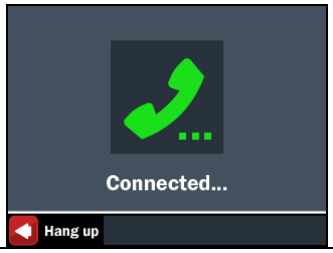
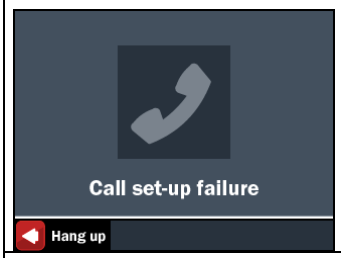
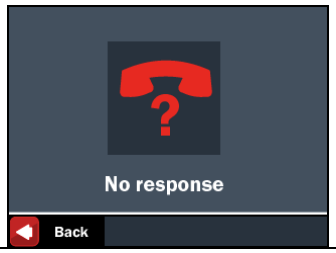
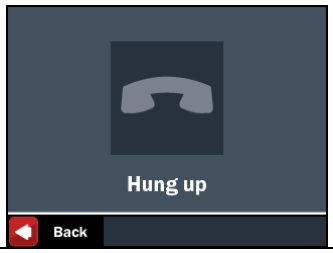
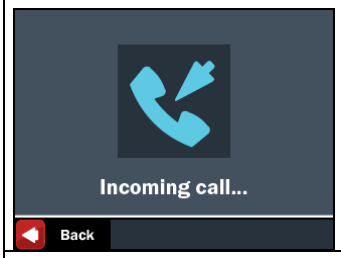
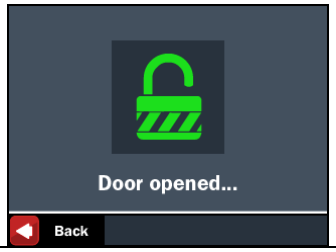
	
Entering the text to be searched	Selecting one of the contacts found

The text string is retrieved on the current level and all sublevels of the telephone directory. The count of contacts found is displayed on the top line. The first 3 (or 4) found contacts are displayed in the central part of the window.

To browse through the contacts found and select the required one, push the quick dialling button 6, thus recovering the arrow function of the numeric keypad.

Status Information

In addition to the above described modes, the 2N® Helios IP display indicates various device statuses:

		
Call being set up	Ringing – outgoing call	Call connected
		
Call set-up failure	No response	Call terminated
		
Incoming call	Door opened/Unlocked	

4.3 2N® Helios IP Control as Viewed by Internal User

This section describes the 2N® Helios IP control as viewed by an internal user.

Receiving of 2N® Helios IP Calls

Incoming calls from 2N® Helios IP can be received like any other call. You can open the lock and activate or deactivate a user or profile during the call using your telephone numeric keypad. The call duration is limited to avoid unintentional 2N® Helios IP line blocking. Use the Call time limit parameter to set the maximum call duration (refer to **Miscellaneous**). To prolong a call push the # button on your telephone any time. A short beep 10 s before the call end signals an automatic all termination.

Calling to 2N® Helios IP

2N® Helios IP allows to answer an incoming call too. To set the required parameters use the Incoming calls item, refer to **Miscellaneous**.

Code Door Opening (Switch Activation)

2N® Helios IP is equipped with a door unlocking switch. To activate the switch enter the valid code (see **Miscellaneous**) on the numeric keypad.

Procedure: Enter the lock 1 or lock 2 activating code using your telephone numeric keypad and push * (confirmation is unnecessary if the Lock code without confirmation option is selected, refer to **Miscellaneous**).

A valid code is announced by acoustic signalling -- . An invalid code is announced by acoustic signalling -.-.-.

User Activation and Deactivation

You can activate or deactivate a user and define call routing to the user telephone numbers using the numeric keypad. For more details refer to the Telephone Directory subsection.

Procedure: Enter the user activation or deactivation code using the numeric keypad and push * for confirmation.

A valid code is announced by acoustic signalling --. or .-- depending on the code type. An invalid code is announced by acoustic signalling -.-.-.

Profile Activation and Deactivation

You can activate or deactivate a profile and define call routing to the telephone numbers assigned to the profile using the numeric keypad. For more details refer to the Scheduler subsection.

Procedure: Enter the profile activation or deactivation code using the numeric keypad and push * for confirmation.

A valid code is announced by acoustic signalling -.- or -.-. depending on the code type. An invalid code is announced by acoustic signalling .-.-.-.

4.4 Maintenance

A frequent use makes the device surfaces, especially the keyboard, dirty. Use a piece of soft cloth damped with clean water to remove the dirt. You are recommended to follow the instructions below while cleaning:

- Do not use aggressive detergents (such as sand or strong surfactants).
- Clean at dry weather to make penetrated water, if any, dry up quickly.

5 Technical Parameters

This section describes the technical parameters of the product.

5.1 Technical Parameters

Power Supply

PoE 802.3af	48 V / 380 mA DC

or

Power supply adapter	230 V±10%, 50/60 Hz / 12V DC
DC power supply	12 V / 1A DC

VoIP

Signalling	SIP
Count of channels	2
Audio codecs	G.711 PCM, 64 kbps
Video codecs	H. 264, 64 – 2048 kbps

Interfaces

Ethernet	
Connector	Terminal block plug
Network type	10/100 BASE-T
Relay outputs	
Maximum voltage	30 V AC/DC
Maximum current	1 A AC/DC

Others

Dimensions	210×100×29 mm (h×w×d)
Weight	up to 500 g
Operational temperature range	–40 to +50 ºC
Coverage	IP53

6 Supplementary Information

This section provides supplementary information of the product.

Here is what you can find in this section:

- Regulations and Directives
- List of Figures
- List of Abbreviations

6.1 Regulations and Directives

2N® Helios IP conforms to the following directives and regulations:

- Directive 1999/5/EC of the European Parliament and of the Council of 9 March 1999 – on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity;
- Directive 2006/95/EC of the European Parliament and of the Council of 12 December 2006 on the harmonisation of the laws of Member States relating to electrical equipment designed for use within certain voltage limits;
- Directive 2004/108/EC of the European Parliament and of the Council of 15 December 2004 on the approximation of the laws of the Member States relating to electromagnetic compatibility and repealing Directive 89/336/EEC;
- Directive 2002/96/EC of the European Parliament and of the Council of 27 January 2003 on waste electrical and electronic equipment;
- Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC;
- Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

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2N TELEKOMUNIKACE a.s.

Modřanská 621, 143 01 Prague 4, Czech Republic
Tel.: +420 261 301 500, Fax: +420 261 301 599
E-mail: sales@2n.cz
Web: www.2n.cz